

555 MISSION STREET

San Francisco Planning Department

1999.603E

STATE CLEARINGHOUSE NO. 2000052043

DRAFT EIR PUBLICATION DATE: JULY 15, 2000

DRAFT EIR PUBLIC HEARING DATE: AUGUST 17, 2000

DRAFT EIR PUBLIC COMMENT PERIOD:

JULY 15, 2000 TO AUGUST 29, 2000

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DATE: July 15, 2000

TO: Distribution List for the 555 Mission Street Project Draft EIR

FROM: Hillary Gitelman, Environmental Review Officer

SUBJECT: Request for the Final Environmental Impact Report for the 555 Mission Street Project (Planning Department File No. 1999.603E)

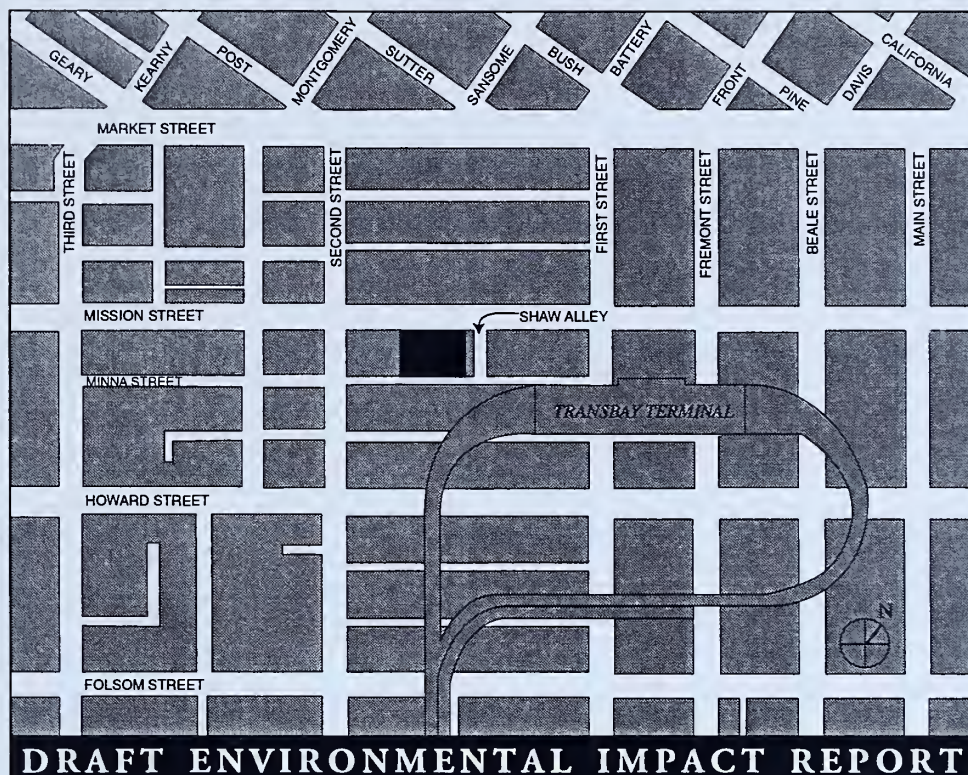
This is the Draft of the Environmental Impact Report (EIR) for the 555 Mission Street Project. A public hearing will be held on the adequacy and accuracy of this document approximately 30 days after publication of the Draft EIR. After the public hearing, our office will prepare and publish a document titled "Summary of Comments and Responses" that will contain a summary of all relevant comments on this Draft EIR and our responses to those comments. It may also specify changes to this Draft EIR. Those who testify at the hearing on the Draft EIR will automatically receive a copy of the Comments and Responses document, along with notice of the date reserved for certification; others may receive such copies and notice on request or by visiting our office. This Draft EIR together with the Summary of Comments and Responses document will be considered by the City Planning Commission in an advertised public meeting and certified as a Final EIR if deemed adequate.

After certification, we will modify the Draft EIR as specified by the Comments and Responses document and print both documents in a single publication called the Final EIR. The Final EIR will add no new information to the combination of the two documents except to reproduce the certification resolution. It will simply provide the information in one, rather than two, documents. Therefore, if you receive a copy of the Comments and Responses document in addition to this copy of the Draft EIR, you will technically have a copy of the Final EIR.

We are aware that many people who receive the Draft EIR and Summary of Comments and Responses have no interest in receiving virtually the same information after the EIR has been certified. To avoid expending money and paper needlessly, we would like to send copies of the Final EIR to private individuals only if they request them. If you would like a copy of the Final EIR, therefore, please fill out and mail the postcard provided inside the back cover to the Major Environmental Analysis Office of the Planning Department within two weeks after certification of the EIR. Any private party not requesting a Final EIR by that time will not be mailed a copy. Public agencies on the distribution list will automatically receive a copy of the Final EIR.

Thank you for your interest in this project.





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1660 Mission Street, Suite 500, San Francisco, CA 94103

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I. SUMMARY

A. PROJECT DESCRIPTION

The 555 Mission Street project site is on the south side of Mission Street, between First Street and Second Street one block south of Market Street and one block west of the Transbay Transit Terminal. The site is approximately 34,300 sq. ft. in size, and comprises Lots 69, 70, 78, 79, 80, and 81 of Assessor's Block 3721.

The project site is entirely within the C-3-O (Downtown Office) district. The C-3-O district is described in Planning Code Section 210.3 as consisting primarily of office development focusing on finance, corporate headquarters, and service industries, and serving as an employment center for the region. It permits office uses and retail sales and personal services uses. The district permits a base floor area ratio (FAR) of 9:1. In this district, a maximum FAR of 18:1 is permitted subject to height and building bulk limitations with the inclusion of transferable development rights (TDR). The project site is split between two height and bulk districts: Lot 70, on the west side of the project site, is in a 500-S district, and Lots 69, 78, 80, and 81, on the east side of the project site, are in a 550-S Height and Bulk District. The 500-S and 550-S Height and Bulk districts limit buildings to 500 and 550 feet, respectively (assuming sufficient TDR to permit that density).

The 555 Mission Street project would be a 31-story office building (about 455 feet tall, including the parapet) with two levels of underground parking. The total floor area, by use, would be approximately 557,000 gsf of office space and about 8,000 gsf of ground-floor retail space. The proposed project would have an FAR of about 16.4 to 1. The project would have about 150 valet parking spaces on two basement levels of approximately 38,990 square feet, accessible via ramps on Minna Street (or about 69 independently accessible spaces). The ground-floor retail space would be leased for food services, business services, and/or other

incidental and support uses. Three off-street truck loading spaces would be provided with access from Minna Street.

The building would have a five-story base section, with a height of about 60 feet, in compliance with Planning Code bulk requirements calling for the building base to be no taller than 1.25 times the width of the widest abutting street. The lower tower would be 19 stories, up to 310 feet tall. The upper tower would be eight stories up to 420 feet tall. A 35-foot parapet wall would rise flush with the exterior wall, set back only on the west side. The parapet is proposed as an architectural element that would be primarily decorative but would also screen the rooftop mechanical penthouse from view. With the parapet, the proposed project would be about 455 feet tall.

The proposed project would include ground-level open space, located on the west side of the new building and totaling approximately 11,000 sq. ft. The open space would be designed to encourage use and activity, with seating and strolling areas and direct linkages between Mission and Minna Streets and the retail and lobby spaces of the building. The main entrances to the building lobby would be from Mission Street.

The project would require the following Planning Commission actions: 1) review under Planning Code Section 309 for compliance with the downtown provisions of the Planning Code and for an exception to the building bulk requirements; 2) project authorization under Planning Code Section 322 for office development; 3) an exception under Planning Code Section 148 for exceedances of the wind comfort criterion; and 4) approval of an accessory use for parking up to 7% of office gross floor area under Planning Code Section 204.5.

The proposed project would require exceptions, under Planning Code Section 272, to exceed lower tower average floor area limits of 17,000 sq. ft., by about 2,000 sq. ft., and upper tower average floor area limits of 12,000 sq. ft., by about 5,000 sq. ft.

B. MAIN ENVIRONMENTAL EFFECTS

An application for environmental evaluation for the project was filed September 8, 1999, and supplemented with revised design and program (floor area) information on February 29, 2000. On the basis of an Initial Study published on May 6, 2000, the San Francisco Planning Department determined that an EIR was required. The Initial Study determined that the following effects of the project would either be insignificant or would be reduced to a less-than-significant level by mitigation measures included in the project and thus required no further analysis: architectural resources, noise, construction air quality, utilities/public services, biology, geology/topography, water, energy/natural resources, hazards, and archaeological resources. Therefore, the EIR does not discuss these issues. The Initial Study also found that land use, business displacement, visual quality/urban design changes, and shadows would not cause potential significant environmental effects and require no further analysis, but noted that the EIR would include a discussion of these topics for informational purposes. The project's potentially significant impacts in the area of wind, transportation, air quality, and growth inducement are analyzed in this EIR.

LAND USE, ZONING, AND PLAN CONSISTENCY (p. 32)

The proposed project would demolish the existing structures on site and construct a 31-story (about 455 feet tall including the parapet) office building with two levels of underground parking. The total floor area in the new building would include approximately 557,000 gsf of office space, about 8,000 gsf of ground-floor retail space, and about 150 valet parking spaces (about 38,990 sq. ft.) on two levels. The ground-floor retail space would be leased for food services, business services, and/or other incidental and support uses.

This proposed development would intensify land use at the project site consistent with the Downtown Plan (adopted November 29, 1984), an element of the *San Francisco General Plan*. The intensification in use, in the form of a new office building, would be compatible with other

uses in the vicinity, and would not alter the general land use pattern of the immediate area, which includes several high-rise office buildings. The project would also not disrupt or divide the neighborhood, since it would be developed within the existing block configuration.

The building would exceed the lower and upper tower bulk requirements in Section 270(d) of the Planning Code, and therefore would require an exception under Planning Code Section 309. Transferable development rights (TDR) would be used because the proposed project would exceed the base 9:1 FAR and have a total project FAR of about 16.4 to 1.

VISUAL QUALITY/URBAN DESIGN (p. 43)

The project would be constructed within a densely built urban area. The proposed project involves demolition of six buildings, mostly two to four stories in height, to build a 31-story building. The new building would be visible from surrounding locations, similar to other approved and constructed office towers in the vicinity. The project would not substantially obstruct any scenic views or vistas currently enjoyed from publicly accessible open space, and would not result in a significant visual impact.

SHADOWS AND WIND (p. 52)

Shadows

The project would not cast shadows to any public open spaces, including those covered under Section 295 of the San Francisco Planning Code, and therefore would not be considered to have a significant shadow impact. The proposed project would shade some portions of the street and sidewalk on Mission Street near the proposed project site during midday periods. The sidewalk on Mission Street in front of Golden Gate University and the Golden Gate University entry plaza would also be shaded by the proposed project at some times of the day during certain seasons.

Wind

The proposed project would generally increase wind speeds in the area compared to existing conditions, but would not cause an exceedance of the 26 mph hazardous wind criterion, and would not result in a significant wind impact. With the project, 20 of the 33 test locations would exceed the comfort criteria, as compared to 10 test locations exceeding under existing conditions. Wind at four locations within the proposed project plaza would be above the 7 mph seating area comfort criterion. The range of wind speeds with the project would be similar to existing conditions; they would range from 3 to 16 miles per hour over 10% of the time using the comfort criteria methodology.

TRANSPORTATION (p. 70)

Transportation impacts associated with the proposed project were determined based on an estimate of person trips that would be generated by the project on a daily basis and during the PM peak hour. The person-trips were calculated based on the proposed land uses for the project, categorized by modes of travel according to the location of trip origins and destinations and survey data from downtown San Francisco. Based on these assumptions and calculations, the proposed project would generate an estimated 11,285 daily person-trips, with an estimated 1,185 person trips occurring during the PM peak hour, when traffic is at its heaviest. Person-trips generated by the existing uses on the proposed project site during the PM peak-hour were counted and subtracted from the project generated trips to yield about 1,035 net new PM peak-hour person-trips. Out of a total of 265 PM peak-hour vehicle trips, about 255 would be vehicles leaving the project site or vicinity and about 10 would be traveling to the site.

Under Existing Plus Project conditions, all of the signalized intersections would operate at the same level of service as in the Existing conditions. Average delay per vehicle would increase at seven of the nine signalized intersections (delays would increase from about one to nine seconds) and would not change at New Montgomery and Mission Streets and First and Mission

Streets. The intersections of Third and Market Streets, First and Harrison Streets, and Essex and Harrison Streets would continue to operate at LOS F. The intersections of Third and Mission Streets, First and Mission Streets, and First and Howard Streets would continue to operate at LOS E. The intersection of Second and Mission Street would degrade from LOS C to LOS D and the intersections of New Montgomery/Mission and Second/Howard would remain at LOS C. The project would not substantially increase delays at intersections already operating at LOS E or F, and therefore would not cause significant impacts at the nine signalized intersections.

At the unsignalized intersection of Second and Minna Streets, the addition of project traffic would result in the deterioration of the Minna Street approach from LOS B to LOS C. Average vehicle delays at the westbound approach would increase from about seven seconds to about 12 seconds. This would not be considered significant.

Of the 635 PM peak hour transit trips that would be generated by the project, about 360 trips (57%) would end at destinations within San Francisco and about 275 trips (43%) would end at locations outside San Francisco. None of the transit carriers would reach or exceed the capacity utilization threshold of TOLOS E (135 percent for BART, 96 percent for Muni, and 100% for all other operators) with the added project trips.

The proposed project would supply about 38,990 square feet of parking on site, which falls within the maximum of 7% of gross floor area or 39,557 square feet for accessory parking. The proposed project would generate a demand for about 610 parking spaces. The proposed provision of 150 on-site valet-assisted parking spaces (or about 69 self-park spaces) would result in a shortfall of 460 spaces. Since the off-site parking facilities currently operate at 85% and 83% capacity, at times motorists may have to circle the area to find available parking. The project would contribute to increased competition for off-street and on-street parking in the vicinity.

Pedestrian trips would include a combination of all or some of the 31 walk trips, 633 transit trips, and 265 vehicle trips generated by the project in the PM peak hour, depending on the trip destinations and parking locations. During the peak 15 minutes of the PM peak hour, all crosswalks at Second and Mission would operate at LOS A under the Existing Plus Project conditions.

The project would generate additional vehicle trips turning from Minna Street on to Second Street. Since bicyclists on Second Street have the right-of-way, the potential impacts on bicycle traffic would not be considered significant. The project would provide bicycle facilities on-site, including a storage area for at least seven bicycles in the project garage. This would meet requirements in the Planning Code, Section 155(j).

The estimated demand for freight and service vehicle delivery and loading at the proposed project would be about 120 daily truck trips for the office and retail uses. The project proposes to provide three freight loading spaces on Minna Street and six van-sized loading spaces in the garage, which would meet both the code requirement and the average and peak-hour loading demand.

The construction period for the proposed project is expected to begin in early 2001 and last approximately 24 months. Demolition and site clearance would occur in first three months, foundation work would occur in the five months following, and the construction of the building would last 16 months. The project would be occupied in early 2003. The heaviest truck activity would occur in the first two phases of construction, when an average of 15 and maximum of 30 trucks would visit the project site daily. During the last phase, an average of 10 and maximum of 20 trucks would go the project site daily.

Under future 2015 cumulative conditions, average vehicle delays would increase at all intersections. The intersections of Third and Market, First and Harrison, and Essex and Harrison would continue to operate at LOS F as under the Existing Plus Project conditions. The intersections of Third and Mission Streets, First and Mission, and First and Howard

Streets would deteriorate from LOS E to LOS F. The intersection of Second and Mission Streets would deteriorate from LOS D to LOS E; the intersection of Second and Howard Streets would deteriorate from LOS C to LOS E, and the intersection of New Montgomery and Mission Streets would deteriorate from LOS C to LOS D. Significant cumulative impacts would occur at the Third/Mission, First/Mission, First/Howard, Second/Mission, and Second/Howard intersections. The proposed project would make a noticeable contribution to the cumulative growth at the following intersections: Second/Mission (13.5%), Second/Howard (28.8%), First/Mission (14.3%), and First/Howard (13.2%). Mitigation Measures are identified that would reduce or avoid the significant cumulative effects at these intersections. Some of these measures are under the control of the project sponsor, and if determined to be feasible would be adopted by the Planning Commission as conditions of approval. Some measures are under the jurisdiction of the Department of Parking and Traffic; the implementation of these measures is not assured, and they would not eliminate all significant cumulative impacts on traffic.

The project would contribute less than 2% to the future ridership on AC Transit and thus would not be considered to contribute considerably to significant cumulative impacts on that carrier. Transit services to the North Bay and South Bay would be adequate to meet projected demand. Golden Gate Transit buses and ferries are expected to operate at 85% and 56% capacity, respectively. Service to the South Bay is estimated to operate at 83% capacity on BART, 97% on CalTrain, and 92% on SamTrans. Thus, no significant crowding impacts would occur on these regional carriers under future cumulative conditions. The proposed project would contribute approximately 3% of the increase in transit ridership. The Muni TOLOS service standards would be exceeded even without the project, and therefore the project contribution would not be considerable under the cumulative conditions.

There are about 840 existing on-street parking spaces and about 4,575 existing off-street parking spaces in the study area. Within the project vicinity, development is expected to result in removal and construction of off-street parking, as well as an increase in overall parking demand. A recent summary concluded that there would be a net loss of about 750 public

parking spaces by the year 2015. With this anticipated parking shortfall, it would be relatively difficult to park in the nearby vicinity, and drivers would be forced to modify their behavior to look for parking farther from their destination, to drive to the site at times of the day and week when more parking is available, or switch modes of transportation. While potentially inconvenient, these modifications would be consistent with the City's Transit First Policy, and the projected parking shortfall would not be considered to be a significant impact.

AIR QUALITY (p. 95)

Buildout of the proposed project would result in a total increase of approximately 1,430 vehicle trips per day. Based on URBEMIS7G modeling results, increased trips associated with the proposed development would generate approximately 43 lb/day of ROG, 48 lb/day of NO_x, and 15 lb/day of PM₁₀. Nominal emissions caused by project operation of stationary sources would also result from the use of electricity and natural gas at the site. Project development would not result in operation emissions exceeding the BAAQMD's significance thresholds for ROG, NO_x, or PM₁₀. The project's contribution to regional emissions would result in a less-than-significant environmental impact.

The project would generate about 420 pounds per day of CO. The BAAQMD has established a threshold of 550 pounds per day, above which a localized CO analysis is recommended. Although the project would not cause overall emissions of CO above this threshold, project traffic could contribute to increased localized CO concentrations in the immediate vicinity of congested intersections. The intersections at Second and Minna Streets, Second and Mission Streets, and First and Mission Streets were analyzed for potential localized CO "hot-spots," since these are where the project traffic would have the greatest potential for contributing to a CO violation. Congestion at these intersections would generate maximum roadside concentrations of approximately 8.3 ppm of CO on a one-hour basis and 6.1 ppm of CO on an eight-hour basis. These concentrations would not exceed State or federal CO standards, and would not be considered significant.

GROWTH INDUCEMENT (p. 105)

The project would construct about 557,000 gross square feet of office space and 8,000 gross square feet of retail space for food services, business services, and other incidental and support uses. The project would not construct housing nor would it displace existing housing. Space at the site is not now fully used. Demolition of existing buildings on site would displace approximately eight existing businesses and some existing employees. Employment at the site would increase to a total of about 1,963.

New downtown workers would increase the demand for housing in San Francisco and in other parts of the Bay Area. The project would contribute to housing construction in the City by meeting the City's Job-Housing Linkage Program. Housing developed as a result of this program would be dispersed throughout the City and subject to project-specific CEQA analysis as appropriate. The project would be built in a developed urban area, and no expansion of municipal infrastructure not already under consideration would be required to serve the project. For these reasons, the project would not be considered to result in significant growth inducement impacts.

C. MITIGATION MEASURES (p. 108)

Mitigation measures identified in this EIR or in the Initial Study (those from the Initial Study are identified by a *) as necessary to mitigate significant environmental effects are listed below.

TRANSPORTATION**MITIGATION MEASURES IDENTIFIED IN THIS REPORT**

Under the Cumulative 2015 Conditions, level of service at five study area intersections would degrade to LOS E or F and 555 Mission Street would have a noticeable contribution to

cumulative traffic growth at four of those intersections: Second/Mission, Second/Howard, First/Mission, and First/Howard. To reduce project contributions to congestion at the local intersections, the project sponsor would be required to implement a Transportation Management Program (TMP) consistent with Planning Code Section 163 and would be required to pay a one-time fee under the Transportation Impact Development Fee (TIDF) program to support transit downtown. In addition, the following mitigation measures would reduce, but not eliminate p.m. peak hour vehicle trips associated with the project.

1. As required by the Planning Code, prepare and implement a Transportation Management Program. The TMP shall include, but not be limited to features such as:
 - a. A prohibition on daily, weekly or monthly discounted parking rates
 - b. A marketing program for commute alternatives with enough variety to appeal to differing needs of employees of different firms in the building, including features such as employee information packets; regular distribution throughout the project building of information on transportation system changes, such as new or changed transit routes; and regular distribution of information promoting use of public transit, ridesharing, and flextime.
 - c. A requirement that large employers within the project building either provide for their employees to set aside pre-tax funds for transit expenses under Section 125 of the Internal Revenue Code, or provide subsidized transit passes and transit debit cards to building employees.
2. As noted above, as a part of the requirements of Section 163 of the Planning Code, a TMP is required to be developed by the project sponsor and approved by the Director of Planning. Based on Planning Department guidance as contained in *Transportation Management Programs in Greater Downtown - Developer's Manual for Procedures and Performance Criteria* (January 1988), the project's TMP would include a project-specific numerical goal for reducing commute travel by single occupancy vehicles. This numerical goal shall be set at a level which acknowledges the project's proximity to substantial transit services. At a minimum, the goal shall be set at a level that would require commuters to/from the project site to achieve a lower percentage use of single-occupant vehicles than the average percentage by workers in buildings in the C-3 district of San Francisco with Section 163 Transportation Management Programs.
3. Implement a parking rate structure at the project garage which is both consistent with San Francisco Planning Code Section 155 and other permit approval and Planning Code requirements, and also provides a financial disincentive for vehicles to exit the garage during the p.m. peak period of congestion (4:30 to 6:30). The peak period financial

disincentive for vehicles parking more than four hours and leaving during the peak period shall be no less than a surcharge equal to the public rate for one hour of parking in the same garage.

The following potential mitigation measures are identified for consideration by the Department of Parking and Traffic to reduce the cumulative impacts at the identified intersections and maintain acceptable levels of service.

4. Second/Mission: Monitor traffic operations at the Second and Howard Street intersection as traffic increases over the next fifteen years. When the traffic operations degrade to LOS E, remove parking along northbound Second Street, approaching Mission Street, during the peak hours to improve the intersection operations to LOS C. This would add an exclusive right-turn lane and create one combined through-left lane and one through lane.
5. Second/Howard: Monitor traffic operations at the Second and Howard Street intersection as traffic increases over the next fifteen years. When the traffic operations degrade to LOS E, remove parking along Second Street at the southbound intersection approach to Howard Street during the peak hours to improve the intersection operations to LOS C. This would add an exclusive right turn lane and create two through lanes.

AIR QUALITY

MITIGATION MEASURES PROPOSED AS PART OF THE PROJECT

- *6. The project sponsor would require its contractors to implement as appropriate the BAAQMD's guidelines on basic control measures for emissions of dust during construction: (1) water all active construction areas at least twice daily; (2) cover all trucks hauling soil, sand, and other loose materials or require trucks to maintain at least two feet of freeboard; (3) pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas; (4) sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas; and (5) sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.

NOISE

MITIGATION MEASURES PROPOSED AS PART OF THE PROJECT

- *7. If pile driving is necessary to install pile foundations, the project sponsor would require construction contractors to predrill holes to the maximum depth feasible on the basis of soil conditions. Contractors would be required to use construction equipment with state-of-the-art noise shielding and muffling devices. The project sponsor would also require that contractors schedule pile driving activity for times of the day that would be consistent with Section 2908 of the San Francisco Police Code.

GEOLOGY / TOPOGRAPHY

MITIGATION MEASURES PROPOSED AS PART OF THE PROJECT

- *8. The project sponsor would ensure that the construction contractor conducts a pre-construction survey of existing conditions and monitors any adjacent buildings for damage during construction, if recommended by the geotechnical engineer, in the foundation investigations.
- *9. If dewatering were necessary, the final foundation report would address the potential settlement and subsidence impacts of this dewatering. Based on this discussion, the foundation report would determine whether or not a lateral movement and settlement survey would be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey were recommended, the Department of Building Inspection would require that a Special Inspector (as defined in Article 3 of the San Francisco Building Code) be retained by the project sponsor to perform this monitoring. Instruments would be used to monitor potential settlement and subsidence. If, in the judgment of the Special Inspector, unacceptable movement were to occur during construction, groundwater recharge would be used to halt this settlement. The project sponsor would delay construction if necessary. Costs for the survey and any necessary repairs to service lines under the street would be borne by the project sponsor.

If dewatering were necessary, the project sponsor and its contractor would follow the geotechnical engineers' recommendations regarding dewatering to avoid settlement of adjacent streets, utilities, and buildings that could potentially occur as a result of dewatering.

- *10. If the project sponsor and its contractor would follow the geotechnical engineers' recommendations regarding installation of settlement markers around the perimeter of shoring to monitor any ground movements outside of the shoring itself. Shoring systems would be modified as necessary in the event that substantial movements are detected.

WATER QUALITY

MITIGATION MEASURES PROPOSED AS PART OF THE PROJECT

The project sponsor would ensure that groundwater from site dewatering and stormwater runoff meets the discharge limitations of the City's Industrial Waste Ordinance by carrying out the following:

- *11. If dewatering were necessary, the project sponsor would follow the recommendations of the geotechnical engineer or environmental remediation consultant, in consultation with the Bureau of Environmental Regulation and Management of the San Francisco Public Utilities Commission, regarding treatment, if any, of pumped groundwater prior to discharge to the combined sewer system.

If dewatering were necessary, groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this were found to be necessary by the Bureau of Environmental Regulation and Management of the San Francisco Public Utilities Commission to reduce the amount of sediment entering the combined sewer system.

- *12. The project sponsor would require the general contractor to install and maintain sediment traps in local storm water intakes during construction to reduce the amount of sediment entering the combined sewer system, if this were found to be necessary by the Bureau of Environmental Regulation and Management of the San Francisco Public Utilities Commission.

HAZARDS

MITIGATION MEASURES PROPOSED AS PART OF THE PROJECT

- *13. In addition to local, state and federal requirements for handling soil and groundwater containing designated levels of chemicals, the project sponsor would enter into a

voluntary remedial action agreement with the Department of Public Health pursuant to Health and Safety Code Section 101480 *et seq.* At a minimum, the project sponsor would undertake the following work and any additional requirements imposed by the Department of Public Health under the agreement. Potential remedial action, if appropriate, could involve such measures as natural attenuation, bioremediation, vapor extraction, or excavation and disposal.

- a. A Phase II Environmental Site Assessment would be prepared for the project site. On the basis of historical uses and the conclusions of the Phase I Environmental Site Assessment, soil or groundwater samples, or both, would be collected throughout the project site as directed by the site assessment consultant. Sampling would extend at least to depths proposed for excavation. The samples would be analyzed to identify and quantify any contamination. These studies would be completed by a Registered Environmental Assessor (REA) or a similarly qualified individual prior to initiating any earth-moving activities at the site.

If findings in the Phase II report result in the preparation of a Site Safety and Health Plan, in addition to measures that protect on-site workers, the Plan would include measures to minimize public exposure to contaminated soils. Such measures would include dust control, appropriate site security, restriction of public access, and posting of warning signs, and would apply from the time of surface disruption through the completion of earthwork construction.

- b. Prior to any demolition or excavation at the project site, surveys would be conducted to identify any potentially hazardous materials in existing buildings or building materials. At a minimum, these surveys would identify any asbestos, polychlorinated biphenyls, lead, mercury, or other hazardous materials that would require removal and disposal before demolition. Wherever former site uses or site reconnaissance observations reported in the Phase I Environmental Site Assessments suggest the potential for underground storage tanks or related piping to be present, magnetic surveys or other appropriate surveys would be conducted to locate underground storage tanks. If any are identified, the San Francisco Department of Public Health would determine whether they must be removed or whether they may be closed in place. These surveys would be completed by an REA or a similarly qualified individual.
- c. All reports and plans prepared in accordance with Mitigation Measure No. 8 would be provided to the San Francisco Department of Public Health and any other agencies identified by the Department of Public Health. When all hazardous materials have been removed from existing buildings, and soil and groundwater analysis and other activities have been completed, as appropriate, the project sponsor would submit to the San Francisco Planning Department and the San Francisco Department of Public Health (and any other agencies

identified by the Department of Public Health) a report stating that the mitigation measure has been implemented. The report would describe the steps taken to comply with the mitigation measure and include all verifying documentation. The report would be certified by an REA or a similarly qualified individual who states that all necessary mitigation measures have been implemented.

CULTURAL RESOURCES

MITIGATION MEASURES PROPOSED AS PART OF THE PROJECT

- *14. Given the location and depth of excavation proposed, and the likelihood that archaeological resources would be encountered on the project site, the sponsor has agreed to retain the services of an archaeologist. The archaeologist would conduct a pre-excavation testing program to better determine the probability of finding cultural and historical remains. The testing program would use a series of mechanical, exploratory borings or trenches or other testing methods determined by the archaeologist to be appropriate.

If, after testing, the archaeologist determines that no further investigations or precautions are necessary to safeguard potentially significant archaeological resources, the archaeologist would submit a written report to the Environmental Review Officer, with a copy to the project sponsor. If the archaeologist determines that further investigations or precautions are necessary, he or she would consult with the Environmental Review Officer, and they would jointly determine what additional procedures are necessary to minimize potential effects on archaeological resources.

These additional measures would be implemented by the project sponsor and could include a program of on-site monitoring of all site excavation, during which the archaeologist would record observations in a permanent log. The monitoring program, whether or not there are findings of significance, would result in a written report to be submitted first and directly to the Environmental Review Officer, with a copy to the project sponsor. During the monitoring program, the project sponsor would designate one individual on site as its representative. This representative would have the authority to suspend work at the site to give the archaeologist time to investigate and evaluate archaeological resources if they are encountered.

If evidence of cultural resources of potential significance were found during the monitoring program, the archaeologist would immediately notify the Environmental Review Officer, and the project sponsor would halt any activities that the archaeologist and the Environmental Review Officer jointly determine could damage such cultural resources. Ground disturbing activities that could damage cultural resources would be

suspended for a total maximum of four weeks over the course of construction of each building.

After notifying the Environmental Review Officer, the archaeologist would prepare a written report to be submitted first and directly to the Environmental Review Officer, with a copy to the project sponsor, which would contain an assessment of the potential significance of the find and recommendations for what measure should be implemented to minimize potential effects on archaeological resources. Based on this report, the Environmental Review Officer would recommend specific additional measures to be implemented by the project sponsor. These additional measures could include a site security program, additional on-site investigations by the archaeologist, or documentation, preservation, and recovery of cultural material.

Finally, the archaeologist would prepare a report documenting the cultural resources that were discovered, an evaluation as to their significance, and a description as to how any archaeological testing, exploration or recovery program is to be conducted.

Copies of all draft reports prepared according to this mitigation measure would be sent first and directly to the Environmental Review Officer for review. Following approval by the Environmental Review Officer, copies of the final reports would be sent by the archaeologist directly to the President of the Landmarks Preservation Advisory Board and the California Archaeological Site Survey Northwest Information Center. Three copies of the final archaeology reports would be submitted to the Environmental Review Officer, accompanied by copies of the transmittals documenting its distribution.

D. ALTERNATIVES (p. 117)

In compliance with CEQA requirements this EIR analyzes a reasonable range of project alternatives that would reduce or eliminate significant impacts of the project. These alternatives include a No-Project Alternative, a No Exceptions Alternative, and a Reduced Parking Alternative. No alternative sites have been identified where the project could be constructed and meet most of the project sponsors' objectives and where the project's environmental effects would be reduced or eliminated.

Project decision-makers must approve an alternative instead of the proposed project, if that alternative would reduce or eliminate significant impacts of the project and is determined to be feasible. The determination of feasibility will be made by City decision makers on the basis of

substantial evidence in the record, which will include, but not be limited to, information presented in the EIR and in comments received on the Draft EIR.

ALTERNATIVE A: NO PROJECT (p. 117)

If the No-Project Alternative were implemented, none of the impacts associated with the project would occur. The environmental characteristics of this alternative would be generally as described in the environmental setting sections of Chapter III. Land use, urban design/visual quality and shadow and wind conditions would not change, except as a result of nearby development.

Although the No Project Alternative would not contribute to cumulative transportation impacts on freeways and freeway ramps and at intersections near the project site. Even without the project, however, cumulative growth at other locations in downtown would create substantial increases in commute travel, causing significant transportation impacts similar to those described in Section III.D, Transportation, but without the increment of the cumulative effect caused by the proposed project.

ALTERNATIVE B: NO EXCEPTIONS ALTERNATIVE (p. 118)

The No Exception Alternative would include demolition of all existing structures on the project site and, similar to the project, would construct about 557,000 sq. ft. of office space, 8,000 sq. ft. of retail space, and 38,990 sq. ft. of parking area (150 valet spaces) in two underground levels. Overall, land use conditions would change in a similar manner as described for the project. The change in height and bulk would not result in substantially different conclusions regarding urban design or visual quality effects from those described for the proposed project. Alternative B would be 38 stories tall, plus a mechanical penthouse, and would be 517 feet high, including the penthouse, with the upper three floors terracing back from the western facade to avoid potential shading of Union Square or other Recreation and Park Department properties covered by Section 295 of the Planning Code. While the 517-foot

Alternative B would be about 60 feet taller than the proposed project, the alternative would have similar visual effects as the proposed project in short-range and long-range views. As with the proposed project, Alternative B would not substantially degrade the existing visual character or quality of the area, or result in a substantial, demonstrable negative visual aesthetic effect. Wind effects from Alternative B would not be substantially different from those analyzed for the proposed project; no exceedances of the hazardous wind criterion would occur with Alternative B.

Traffic and transit impacts would be essentially the same as those described for the proposed project, because the amount of occupied building space would be about the same, resulting in similar trip generation from the project site. Alternative B would create a parking shortfall of about 115 spaces, as with the project. Alternative B would contribute to significant cumulative traffic impacts in the future at a similar level to the project's contribution. Air quality impacts from traffic generated by development under Alternative B would be similar to those described for the proposed project for both project-level and cumulative cases.

ALTERNATIVE C: REDUCED PARKING ALTERNATIVE (p. 122)

The Reduced Parking Alternative would include demolition of all existing structures on the project site, and would develop the site with office and ground-floor retail uses more intensely than is now found at the site. Overall, land use conditions or changes in height and bulk, urban design or visual quality, shadow or wind, or growth inducement would not result in substantially different conclusions from those described for the proposed project.

The Reduced Parking Alternative would generate about 1,035 net new PM peak hour person trips and potentially 265 net new PM peak hour vehicle trips, the same as the proposed project. With the reduced parking supply, more employees and visitors to the project site would be forced to find parking at other locations or to shift their mode of travel. The number of vehicle trips exiting Minna Street would be reduced from approximately 155 to 70 trips during the PM peak hour.

If employees and visitors to the site were to continue to drive rather than shift their mode of travel, it would be expected that parking would be available in the more remote locations south of Folsom Street. These trips would be removed from travel through the study area intersections on and north of Folsom Street, but travel would be added to intersections south of the study area. The Reduced Parking Alternative would reduce the project contribution to the Cumulative significant impacts in the study area. The Cumulative 2015 intersection LOS would not change.

With the Reduced Parking Alternative, the parking shortfall associated with the project would increase compared to the proposed project. The parking shortfall for Alternative C would be 540 spaces as compared to 460 spaces with the proposed project. With the reduction in parking on-site, the competition for existing parking spaces in the South of Market area would be increased. For reasons explained in relation to the proposed project, the potential parking shortfall would not be considered a significant impact.

E. AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

This environmental impact report, for a proposed office high-rise project at 555 Mission Street, focuses on the issues of wind, transportation, air quality, and growth inducement as potential significant effects of the project, but also addresses land use, visual quality/urban design changes, and shadows for informational purposes. All other potential environmental effects were found to be at a less-than-significant level or to be mitigated to a level of less-than-significance with mitigation measures agreed to by the project sponsor in a letter dated May 6, 2000. Please see the Initial Study, included in Appendix A, for analysis of issues other than those addressed in this document.

The proposed project design has been presented to the Planning Department for review prior to consideration by the Planning Commission. It is common for preliminary design proposals to be refined somewhat during the review process, and as a result of final design development.

Any notable modifications to the project design would be analyzed to determine whether they would affect information and analysis contained in this DEIR. Other than these potential refinements to the project design, there are no unresolved issues with regard to the project proposal. There are also no areas of substantial controversy known to the EIR preparers.

II. PROJECT DESCRIPTION

Tishman Speyer Properties, the project sponsor, proposes to demolish the six existing buildings on the project site and construct a 31-story building, about 420 feet to the top of the roof with a 35-foot-high parapet, or 455 feet including the parapet. At the fifth and the twenty-fourth floors the building would be set back by varying distances. The total office area in the project would be approximately 557,000 gross sq.ft. There would be approximately 6,000 sq. ft. of lobby space, 8,000 sq. ft. of ground-floor retail space intended for food services, business services, and other incidental and support uses, and 38,990 sq. ft. in two below-grade parking levels totaling about 150 spaces (with attendant parking).¹

The project would provide open space, consisting of a plaza adjacent to the building, totaling approximately 11,000 sq. ft. The plaza would include landscaping and seating areas. The plaza would also serve as a pedestrian connection between Minna and Mission Streets.

A. PROJECT OBJECTIVES

According to the Project Sponsor, the general objectives of the 555 Mission Street project include the following:

- To provide substantial new Class A office space where the Downtown Plan specifies that the largest and tallest buildings should be concentrated, thereby supporting the City's objectives of creating a compact downtown core well served by transit, and enhancing the character of the C-3-O district as a national employment and headquarters center;
- To help meet demand for large, efficient and flexible floor plates, state-of-the-art building systems and infrastructure, energy-efficient design, and adequate on-site parking;
- To provide an active, pedestrian-friendly, street-level open space with attractive landscaping and retail opportunities, which will serve as a key link within the

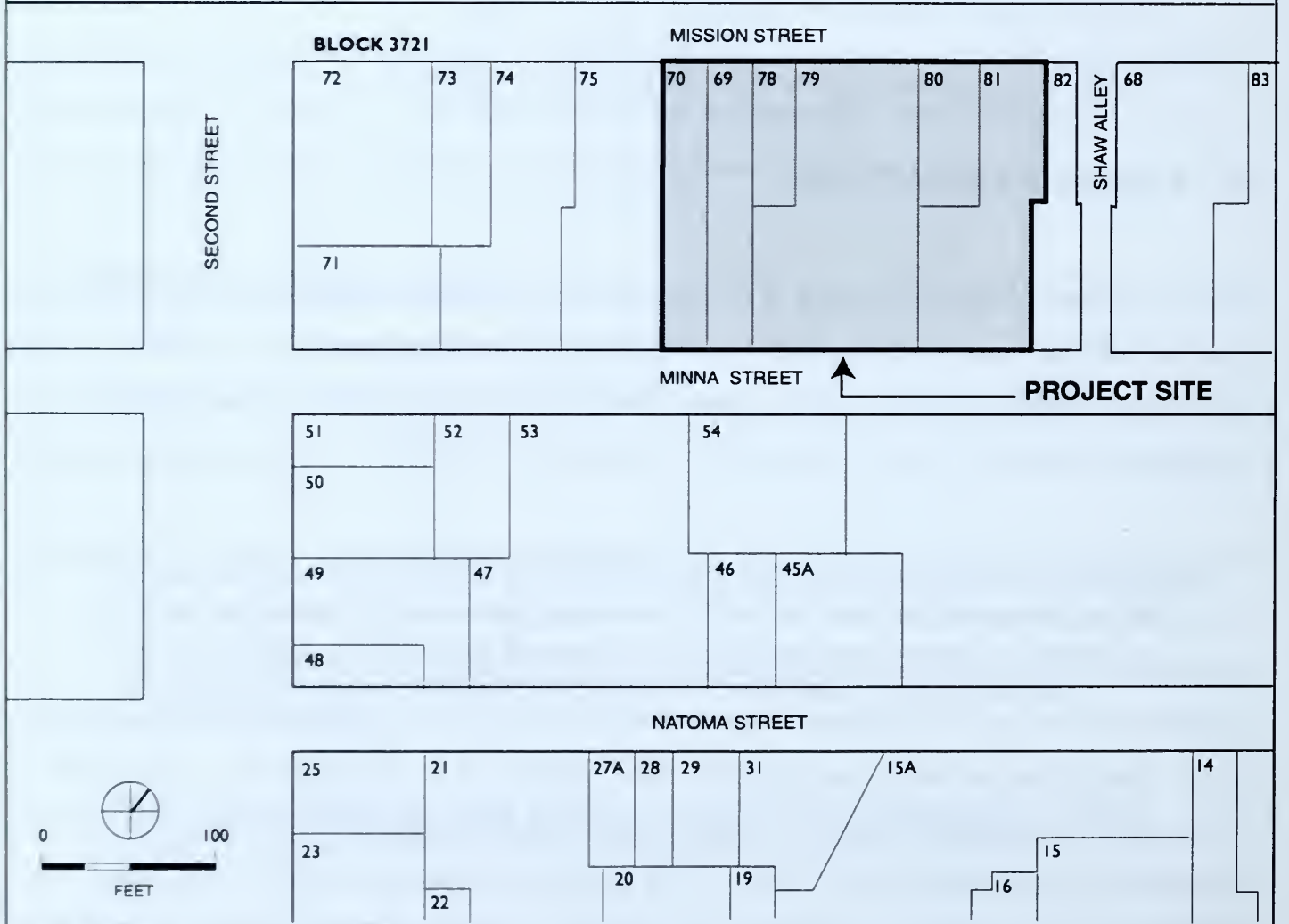
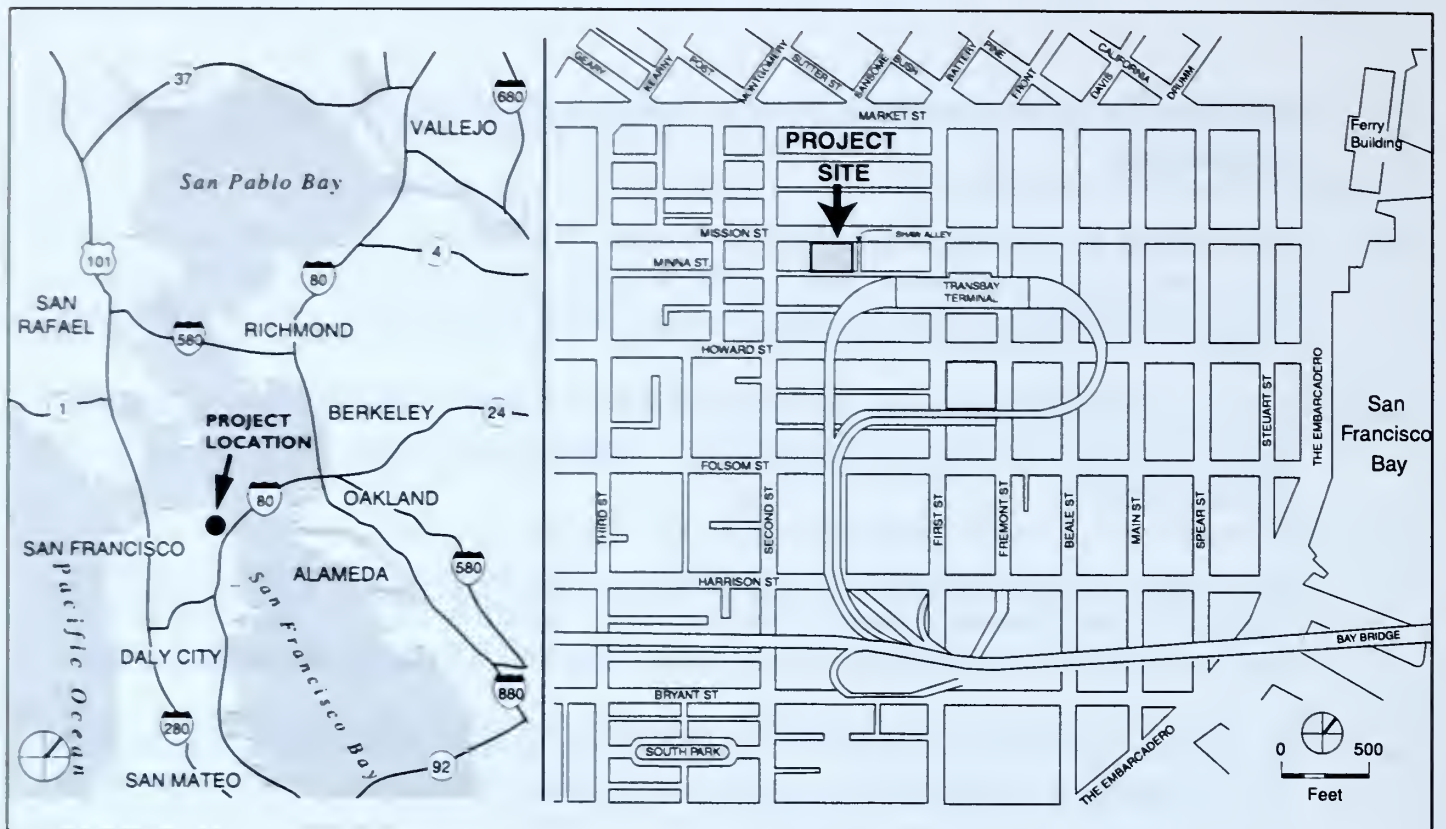
downtown pedestrian network in an area identified in the Downtown Plan as deficient in open space;

- To construct an architecturally distinguished building with a richly detailed, transparent glass, metal and stone curtain wall, which will both blend into the pedestrian scale of the newly developing Mission Street corridor, and into the skyline of the C-3-O district;
- To replace the existing structures on the project site with a seismically safer structure that will enhance the City's preparedness to protect against injury and loss of life from an earthquake;
- To continue coordinating with current owners of the project site to minimize adverse impacts to small business owners who have been tenants at the site, including many who have already moved to new space, and others who will be finding new premises.
- To enhance the size and marketability of the project and to support preservation goals by transferring development rights under the City's TDR program to a site that has a 550-foot height limit and is designated for such TDR;
- To provide a return on investment for the project sponsor.

B. PROJECT LOCATION

The 555 Mission Street project site is on the south side of Mission Street, between First Street and Second Street one block south of Market Street and one block west of the Transbay Transit Terminal (see Figure 1). The site is approximately 34,300 sq. ft. in size. The project site comprises Lots 69, 70, 78, 79, 80, and 81 of Assessor's Block 3721.

The project site is entirely within the C-3-O (Downtown Office) district. The C-3-O district is described in Planning Code Section 210.3 as consisting primarily of office development focusing on finance, corporate headquarters, and service industries, and serving as an employment center for the region. It permits office uses and retail sales and personal services uses. The district permits a base floor area ratio (FAR) of 9:1. In this district, a maximum FAR of 18:1 is permitted subject to height and building bulk limitations with the inclusion of transferable development rights (TDR). TDR involves purchasing unused development potential from one site and transferring it to another site; this is further described in Section III.A, Land Use, Zoning and Plan Consistency.



SOURCE: EIP Associates



555 MISSION STREET

FIGURE I: PROJECT LOCATION

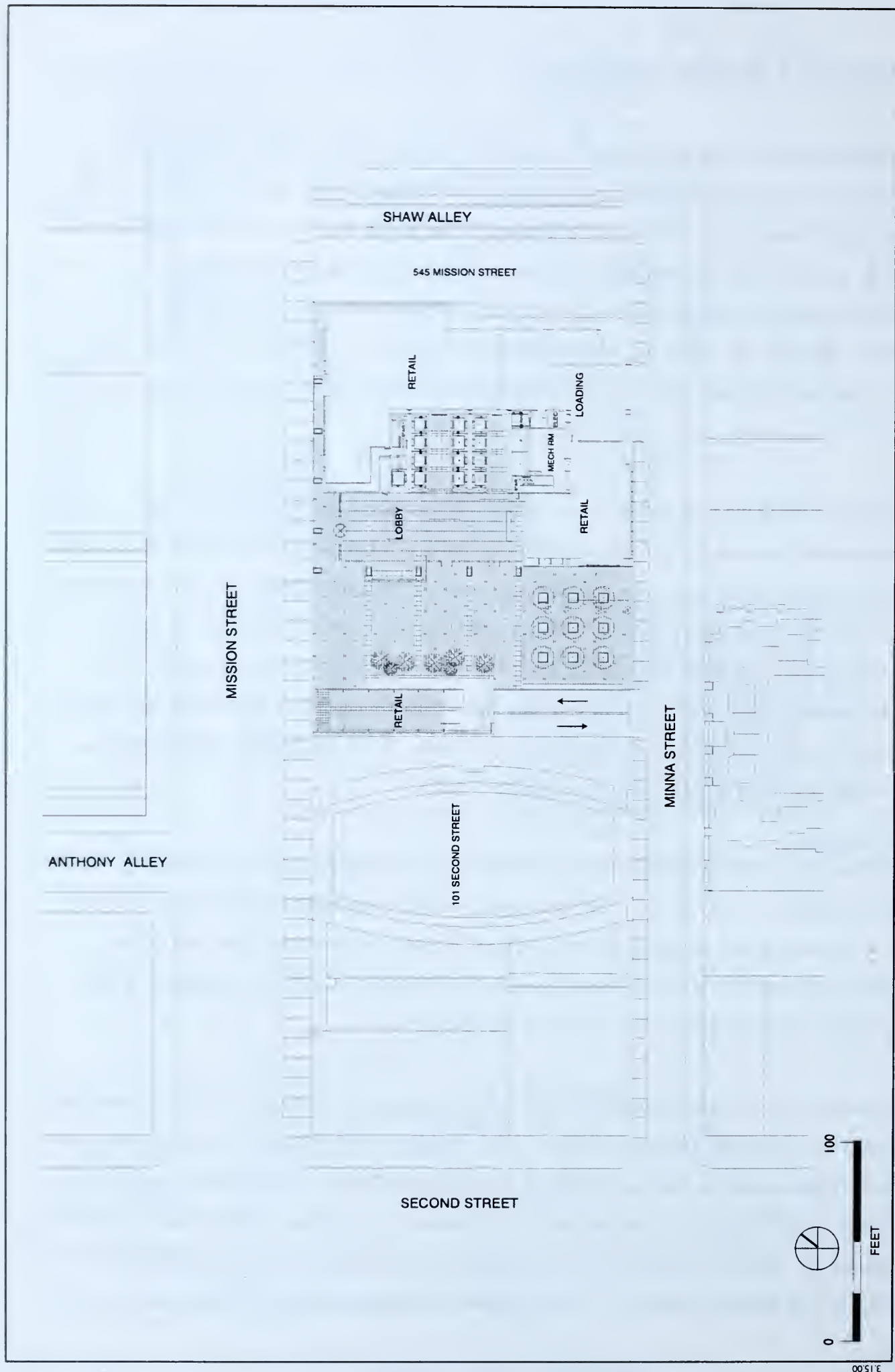
C. PROJECT CHARACTERISTICS

The 555 Mission Street project would be a 31-story office building (about 455 feet tall, including the parapet) with two levels of underground parking. The total floor area, by use, would be approximately 557,000 gsf of office space and about 8,000 gsf of ground-floor retail space. The project would have about 150 valet parking spaces on two basement levels, accessible via ramps on Minna Street (or about 69 independently accessible spaces). The ground-floor retail space would be intended for food services, business services, and other incidental and support uses. Three off-street truck loading spaces would be provided (see Figure 2).

The building would have a five-story base section, with a height of about 60 feet, in compliance with Planning Code bulk requirements calling for the building base to be no taller than 1.25 times the width of the widest abutting street. The lower tower would be 19 stories, up to 310 feet tall. The upper tower would be eight stories up to 420 feet tall. A 35-foot parapet wall would rise flush with the exterior wall, set back only on the west side. The parapet is proposed as an architectural element that would be primarily decorative but would also screen the rooftop mechanical penthouse from view. With the parapet, the proposed project would be about 455 feet tall (see Figures 3 and 4).

The proposed project open space, at ground level on the west side of the new building, would total approximately 11,000 sq. ft. The open space would be designed to encourage use and activity, with seating and strolling areas and direct linkages between Mission and Minna Streets and to the entries, retail or lobby space of the building. The main entrances to the building lobby would be from Mission Street (see Figure 5).

The proposed project would include about 557,000 gross square feet (gsf) of office space and about 8,000 gsf of ground-floor retail space. The building would exceed the lower and upper tower bulk requirements in Section 270(d) of the Planning Code,² and therefore would require an exception under Planning Code Section 309 to exceed lower tower average floor area limits of 17,000 sq. ft., by about 2,000 sq. ft., and upper tower average floor area limits of 12,000 sq. ft., by about 5,000 sq. ft. Transferable development rights (TDR) would be used



SOURCE: KPF - Heller Manus



555 MISSION STREET
FIGURE 2: GROUND FLOOR PLAN

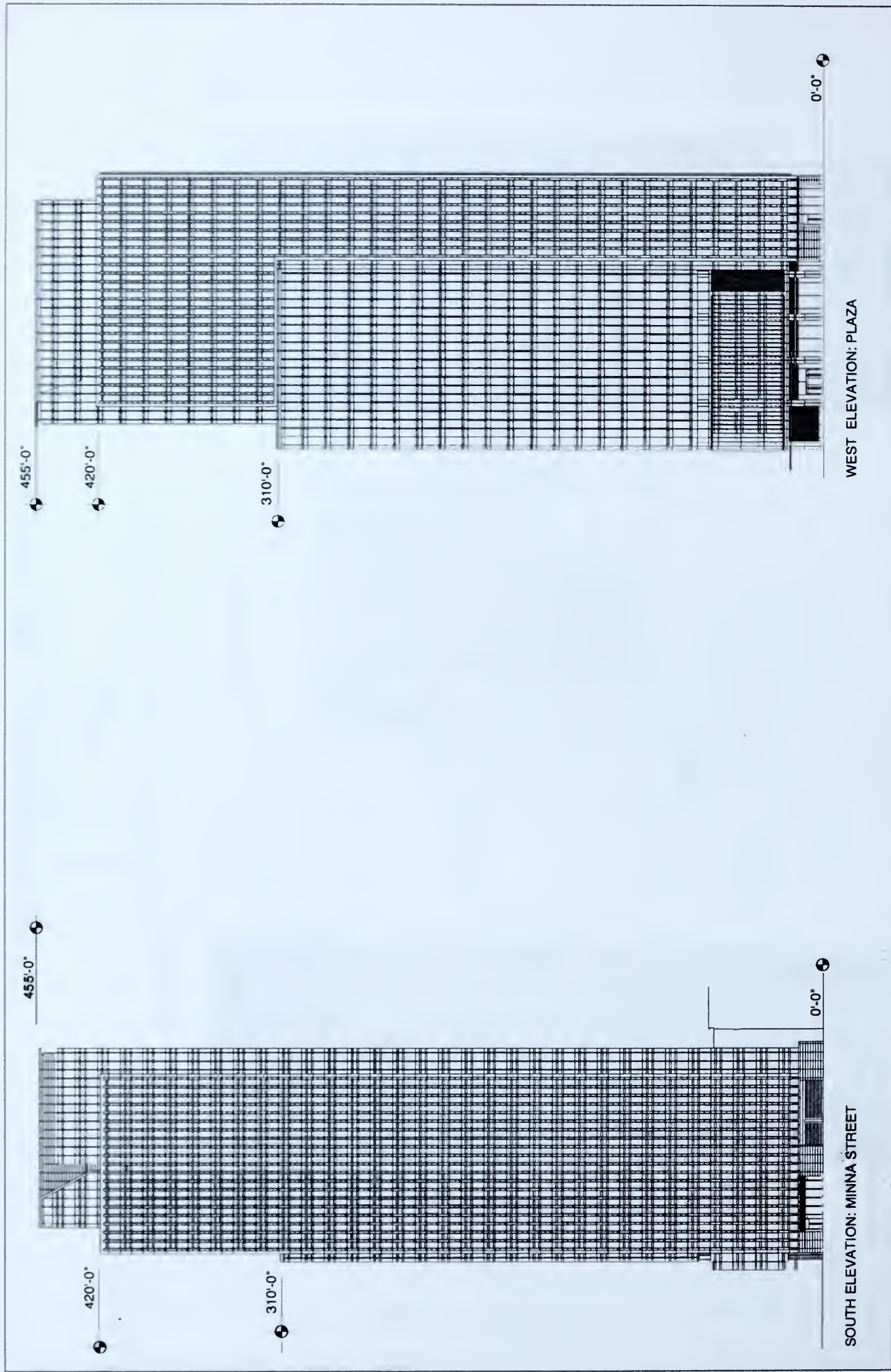


SOURCE: KPFF/ Heller Manus
NOTE: HEIGHTS SHOWN ABOVE MISSION STREET



555 MISSION STREET

FIGURE 3: NORTH AND EAST PROJECT ELEVATIONS

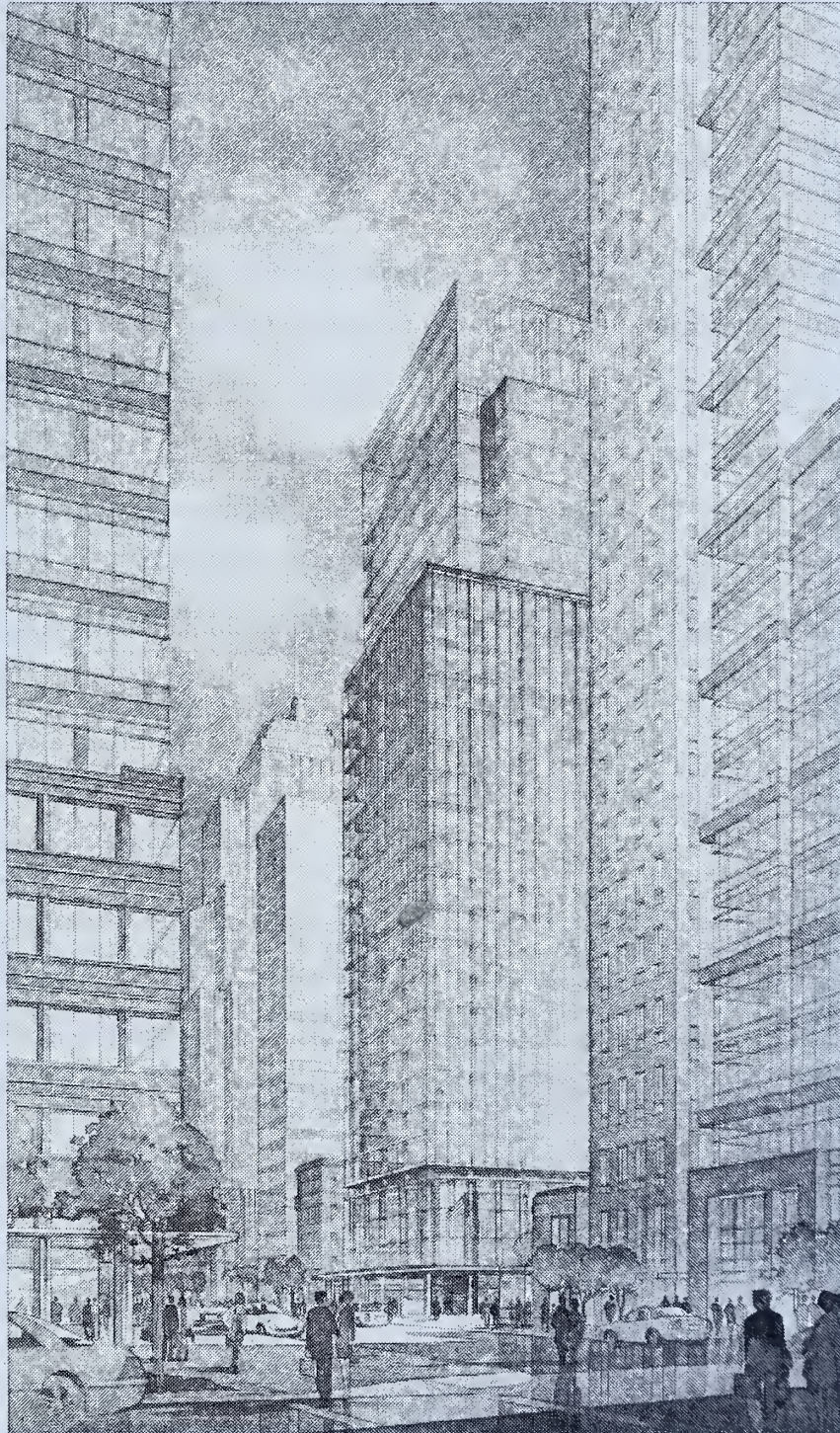


SOURCE: KPF/Heller Manus
 NOTE: HEIGHTS SHOWN ABOVE MISSION STREET



555 MISSION STREET

FIGURE 4: SOUTH AND WEST PROJECT ELEVATIONS



6.19.00

SOURCE: KPF - Heller Manus



555 MISSION STREET

FIGURE 5: ARTIST RENDERING

to allow the proposed project to exceed the base 9:1 FAR, and result in a project total FAR of 16.4 to 1.

D. PROJECT SCHEDULE AND APPROVALS REQUIRED

PROJECT SCHEDULE

The project sponsor expects environmental review, project review, and detailed design to be completed during fall 2000. Planning Commission action and other review would be requested at that time for the entire project, including project authorization for office space under Planning Code Section 322, discussed below under Approval Requirements. Development would likely begin in early 2001. Construction of the proposed project would take approximately 24 months.

APPROVAL REQUIREMENTS

Following a public hearing on the Draft EIR before the Planning Commission, responses to written and oral comments will be prepared. The EIR will be revised as appropriate and presented to the Planning Commission for certification as to its accuracy, objectivity, and completeness. No discretionary project approvals may be granted or permits issued before the Final EIR is certified.

The project would require the following Planning Commission actions: 1) review under Planning Code Section 309 for compliance with the downtown provisions of the Planning Code and for an exception to the building bulk requirements; 2) project authorization under Planning Code Section 322 for office development; 3) an exception under Planning Code Section 148 for exceedances of the wind comfort criterion; and 4) approval of Accessory use for parking up to 7% of office gross floor area under Planning Code Section 204.5.

In the C-3-O district, where the basic permitted floor area ratio is 9:1, a maximum of 18:1 FAR (subject to height and bulk limits) is permitted with the use of transferable development

rights, as discussed further in Section III.A, Land Use, Zoning and Plan Consistency. As the proposed project would exceed the base FAR of 9:1 and result in a project total FAR of 16.4 to 1. The Planning Department would review the building plans to confirm that a proper transfer has occurred pursuant to Planning Code Section 128.

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which established eight Priority Planning Policies, contained in Section 101.1 of the Planning Code, as described as Section III.A, Land Use, Zoning and Plan Consistency.

The project would be reviewed by the Planning Department and the Planning Commission in the context of applicable objectives and policies of the *San Francisco General Plan*, as discussed further in Section III.A, Land Use, Zoning and Plan Consistency.

NOTES - Project Description

1. The 38,990 sq. ft. of parking area has the capacity for 181 valet spaces, according to the San Francisco standard of 215 sq. ft. per valet space stated in Guidelines for Environmental Review, Transportation Impacts, July 1991, City and County of San Francisco, City Planning Department.
2. Building bulk limits are established through maximum building length and diagonal horizontal dimensions and limits on maximum and average floor areas. The project site is in the "S" bulk district, which is defined in Planning Code Section 270(d). For a building under 160 feet in height, the lower tower may not have a length of more than 160 feet and a diagonal dimension of more than 190 feet; the lower tower of a building is the portion of the building from the building base to 160 feet. The building base height is established at 1.25 times the width of the widest adjacent street.

III. ENVIRONMENTAL SETTING AND IMPACTS

An application for environmental evaluation for the project was filed September 8, 1999, and supplemented with revised design and program (square footage) information on February 29, 2000. On the basis of an Initial Study published on May 6, 2000, the San Francisco Planning Department determined that an EIR was required. The Initial Study determined that the following effects of the project would either be insignificant or would be reduced to a less-than-significant level by mitigation measures included in the project and thus required no further analysis: architectural resources, noise, construction air quality, utilities/public services, biology, geology/topography, water, energy/natural resources, hazards, and archaeological resources (see Appendix A, p. A.1, for the Initial Study). Therefore, the EIR does not discuss these issues. The Initial Study also found that land use, business displacement, visual quality/urban design changes, and shadows would not cause potential significant environmental effects and require no further analysis, but noted that the EIR would include a discussion of these topics for informational purposes. The project's potentially significant impacts in the area of wind, transportation, air quality, and growth inducement are assessed in this chapter.

A. LAND USE, ZONING AND PLAN CONSISTENCY

EXISTING LAND USE AND ZONING

The project site is located south of Market Street in an area of downtown San Francisco that has been designated for high-density commercial and residential development. The project site is located about one block south of Market Street and west of the Transbay Transit Terminal in an area that is in transition from low-rise commercial and industrial uses to high-intensity office and residential development. Land use north and east of the project site is characterized primarily by a concentration of high-rise office towers. Of these towers, most are 15 stories or

taller and contain ground-floor retail uses. Generally, buildings north of the project site, near Market Street, are taller than newer development south of Mission Street.

To the southeast of the project site, land use previously dominated by the Embarcadero Freeway and opened up as a result of freeway demolition is now vacant or used for surface parking and remains in Caltrans ownership. Structures to the south and southwest are primarily older commercial buildings, typically from one to six stories in height. Further to the west, beyond Second Street, is the Yerba Buena Center Redevelopment Area, with mixed residential, cultural, office, hotel, and open space uses. Five high-rise towers have been approved and/or are under construction in the project vicinity: 554 Mission Street, an office tower directly north of the project site; One Second Street, an office tower northwest of the project site; 535 Mission Street, an office tower east of the project site; The Century, a residential tower south of the project site; and 524 Howard Street, an office tower southeast of the project site (see Figure 6).

The project site is approximately 34,300 square feet. Existing uses on the site consist of a mix of office and retail activities. The six existing buildings on the site are two to four stories, and all of them were originally constructed between 1906 and 1913. The existing buildings were recently occupied with a mixture of ground-floor retail, office, and service businesses. About one-third of the office space on the project site has recently been vacated by previous long-term tenants. In another third of the office space are long-term tenants currently planning their relocation. The last third of the office space contains new tenants that have agreed to short-term or month-by-month leases.¹ Patrick & Co., an office and print supply shop at 561 Mission Street, was the largest single use on the project site. Patrick & Co. has relocated to 615 Mission Street, about one block west of the project site. The majority of the businesses front on Mission Street and have loading areas on Minna Street. Hathaway Dinwiddie Construction and Steve Alley Cuts are the exceptions, with frontage on Minna Street.



SOURCE: EIP Associates



555 MISSION STREET

**FIGURE 6: EXISTING BUILDINGS AND APPROVED DEVELOPMENT PROJECTS
IN THE PROJECT VICINITY**

Use Districts

The project site is within the C-3-O (Downtown Office) district with a base floor area ratio (FAR) of 9:1. A maximum FAR of 18:1 (subject to height and bulk limits) is permitted with transferable development rights (TDRs). Section 210.3 of the Planning Code describes the C-3-O district in the following way: “This district, playing a leading national role in finance, corporate headquarters and service industries and serving as an employment center for the region, consists primarily of high-quality office development. The intensity of building development is the greatest in the City, resulting in a notable skyline symbolizing the area’s strength and vitality. The district is served by City and regional transit reaching its central portions and by automobile parking at peripheral locations. Intensity and compactness permit face-to-face business contacts to be made conveniently by travel on foot. Office development is supported by some related retail and service uses within the area, with inappropriate uses excluded in order to conserve the supply of land in the core and its expansion areas for further development of major office buildings.”

Transferable development rights are a planning mechanism to permit unused development potential to be shifted from one site to another. When development rights are transferred, further building on the lot from which development rights are obtained (the “transfer” lot) is then limited. In each of the C-3 districts (C-3-O, C-3-R, etc.), TDR are permitted from designated architecturally significant buildings to other sites within the same district beyond adjacent properties, under specified circumstances. As noted above, floor area above a base FAR 9:1 is permitted, to a maximum of 18:1 FAR using TDR, providing height and bulk restrictions are met. Unlike other C-3 districts, sites in the C-3-O can accept TDRs from architecturally significant buildings in any C-3 districts. The project total FAR would be 16.4 to 1.

Height and Bulk Districts

The project site is split between two height and bulk districts; Lot 70 on the west side of the project site, is in a 500-S district, and Lots 69, 78, 80, and 81 on the east side, are in a 550-S height and bulk district. The 500-S and 550-S height and bulk districts limit buildings to 500 and 550 feet, respectively (assuming sufficient TDR to permit that density). In “S” bulk districts, there are no limitations of length or diagonal dimension applicable to the base of a building (see Planning Code Section 270(d)). The base is the lowest portion of the building extending vertically to a streetwall height of up to 1.25 times the width of the widest abutting street or 50 feet, whichever is more. Bulk controls for a lower tower, which is defined as the span between the building base and 160 feet, are a maximum length of 160 feet, a maximum floor size of 20,000 square feet, a maximum diagonal dimension of 190 feet, and a maximum average floor size of 17,000 square feet. The proposed project would require exceptions, under Planning Code Section 272, to exceed lower tower average floor area limits of 17,000 sq. ft., by about 2,000 sq. ft., and upper tower average floor area limits of 12,000 sq. ft., by about 5,000 sq. ft.

CHANGES IN LAND USE

Proposed Land Use

The project would change land use at the project site from a mix of light-industrial, office, and vacant buildings, to more intense office space uses with ground-floor retail space, subsurface parking, and open space. The project would continue to extend the Financial District in the South of Market area.

The proposed project would demolish the existing structures on site. The proposed project would construct a 31-story (about 455 feet tall, including parapet) office buildings with two levels of underground parking. The total floor area would be approximately 557,000 gsf of

office space, about 8,000 gsf of ground-floor retail space, and about 150 valet spaces. The ground-floor retail space would be intended for food services, business services, and other incidental and support uses.

This proposed development would intensify land use at the project site consistent with the Downtown Plan (adopted November 29, 1984), an element of the *San Francisco General Plan*. Given the nature of the project, however, this increase in density represents an expansion of uses which would be similar to and compatible with the uses in the vicinity of the project. Overall, the project would be consistent with existing and planned land uses in the vicinity and zoning for the site. The project would not alter the general land use pattern of the immediate area, which includes several high-rise office buildings noted above. The project also would not disrupt or divide the neighborhood, since it would be developed within the existing block configuration.

Buildings on site are currently occupied by a variety of private businesses. As noted in the Initial Study (Appendix A), demolition of existing buildings on the site would displace some of the eight existing businesses and employees on the project site. Space at the site is not now fully used. Many of the existing businesses and employees would be expected to relocate within San Francisco or elsewhere in the Bay Area. Patrick & Co., an office and print supply shop at 561 Mission Street, was the largest single use on the project site. Patrick & Co. has relocated to 615 Mission Street, about one block west of the project site. All tenants on the project site have short-term leases and six-month termination clauses. Regardless of the proposed project, some of the businesses at the project site could need to relocate by the year 2004 in any case, with or without the project, because many of the buildings on the project site are unreinforced masonry buildings requiring upgrading or vacating by 2004.

PLAN CONSISTENCY

Environmental plans and policies, like the Bay Area Air Quality Management District's *1997 Clean Air Plan*, directly address physical environmental issues and/or contain standards or targets that must be met in order to preserve or improve specific components of the City's physical environment. The proposed project would not obviously or substantially conflict with any such adopted environmental plan or policy.

General Plan Policies

The project site is within the part of San Francisco covered by the Downtown Plan, an Area Plan of the *San Francisco General Plan*. The Planning Commission and other City decision-makers would evaluate the proposed project against the provisions of the *General Plan*, including those in the Downtown Plan, and would consider potential conflicts with the *General Plan* as part of the decision-making process. This consideration of *General Plan* objectives and policies is carried out independently of the environmental review process, as part of the decision to approve, modify or disapprove a proposed project. Any potential conflicts with provisions of the *General Plan* that would cause physical environmental impacts have been evaluated as part of the impacts analysis carried out for other topics in this project EIR and the Initial Study (Appendix A). Any potential conflicts with *General Plan* policies not identified in this EIR could be considered in the project evaluation process and would not alter the physical environmental effects of the proposed project analyzed in this EIR.

The Downtown Plan is the policy document that guides most growth and development in San Francisco's downtown. Centered on Market Street, the plan covers an area roughly bounded by Van Ness Avenue on the west, The Embarcadero on the east, Folsom Street on the south, and Washington Street on the north. The plan contains a number of objectives and policies that address the following issues: provision of space for commerce, retail, housing, and open space; preservation of the past; urban form; movement to, from, and within the downtown

area; and seismic safety. Some key objectives and policies of the *General Plan* relevant to the project are noted here; others may be addressed during consideration of project approval.

Downtown Plan

Objective 1, Policy 1	Encourage development which produces substantial net benefits and minimizes undesirable consequences. Discourage development which has substantial undesirable consequences which cannot be mitigated.
Objective 2	Maintain and improve San Francisco's position as a prime location for financial, administrative, corporate and professional activity.
Objective 2, Policy 2	Guide the location of office development to maintain a compact downtown core and minimize displacement of other uses.
Objective 3, Policy 5	Meet the convenience needs of daytime downtown workers.
Objective 5	Retain a diverse base of support commercial activity in and near downtown.
Objective 9	Provide quality open space in sufficient quantity and variety to meet the needs of downtown workers, residents, and visitors.
Objective 9, Policy 1	Require usable indoor and outdoor open space, accessible to the public, as part of new downtown development.
Objective 10, Policy 2	Encourage the creation of new open spaces that becomes a part of an interconnected pedestrian network.
Objective 13, Policy 1	Relate the height of buildings to important attributes of the city pattern and to the height and character of existing and proposed development.
Objective 13, Policy 4	Maintain separation between buildings to preserve light and air and prevent excessive bulk.
Objective 14, Policy 2	Promote building forms that will minimize the creation of surface winds near the base of buildings.

Objective 15, Policy 1	Ensure the new facades relate harmoniously with nearby facade patterns.
Objective 16, Policy 2	Provide setbacks above a building base to maintain the continuity of the predominant street walls along the street.
Objective 16, Policy 3	Maintain and enhance the incorporation of publicly visible art works in new private development and in various public spaces downtown.
Objective 16, Policy 4	Use designs and materials and include activities at the ground floor to create pedestrian interest.
Objective 19, Policy 1	Include facilities for bicycle users in governmental, commercial, and residential developments.
Objective 21, Policy 2	Discourage access to off-street freight loading and service vehicle facilities from transit preferential streets, or pedestrian-oriented street alleys.

Commerce and Industry Element

Objective 2	Maintain and enhance a sound and diverse economic base and fiscal structure for the city.
Objective 2, Policy 1	Seek to retain existing commercial and industrial activity and to attract new such activity.

Transportation Element

Objective 12.1	Develop and implement strategies which provide incentives for individuals to use public transit, rideshare, bicycling and walking to the best advantage, thereby reducing the number of single occupant auto trips.
Objective 16	Develop and implement programs that will efficiently manage the supply of parking at employment centers throughout the City so as to discourage single-occupant ridership and encourage ridesharing, transit and other alternatives to the single-occupant automobile.

Objective 17	Develop and implement parking management programs in the Downtown that will provide alternatives encouraging the efficient use of the area's limited parking supply and abundant transit services.
Objective 24, Policy 2	Preserve pedestrian-oriented building frontages.
Objective 30, Policy 5	In any large development, allocate a portion of the provided off-street parking for compact automobiles, vanpools, bicycles and motorcycles commensurate with standards that are, at a minimum, representative of the city's vehicle population.
Objective 32	Limit parking in downtown to help ensure that the number of auto trips to and from downtown will not be detrimental to the growth or amenity of downtown.
Objective 40, Policy 1	Provide off-street facilities for freight loading and service vehicles on the site of new building sufficient to meet the demands generated by the intended uses. Seek opportunities to create new off-street loading facilities for existing buildings.

Urban Design Element

Objective 1, Policy 3	Recognize that buildings, when seen together, produce a total effect that characterizes the city and districts.
Objective 3, Policy 1	Promote harmony in the visual relationships and transitions between new and older buildings.

Community Safety Element

Policy 2.1	Assure that new construction meets current structural and life safety standards.
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Accountable Planning Initiative

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which, among other things, established eight Priority Planning Policies. The policies, contained in Section 101.1 of the City Planning Code, are: 1) preservation and enhancement of neighborhood-serving retail uses; 2) protection of neighborhood character;

3) preservation and enhancement of affordable housing; 4) discouragement of commuter automobiles; 5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership; 6) earthquake preparedness; 7) landmark and historic building preservation; and 8) protection of open space. Before issuing a permit for any project or adopting any legislation that requires an Initial Study under the California Environmental Quality Act, or adopting any zoning ordinance or development agreement, and before taking any action which requires a finding of consistency with the General Plan, the City is required to find that the proposed project, legislation, or action is consistent with the Priority Policies.

NOTES - Land Use

1. Shepherd Heery, Tishman Speyer Properties, personal communication, June 16, 2000, to EIP Associates.

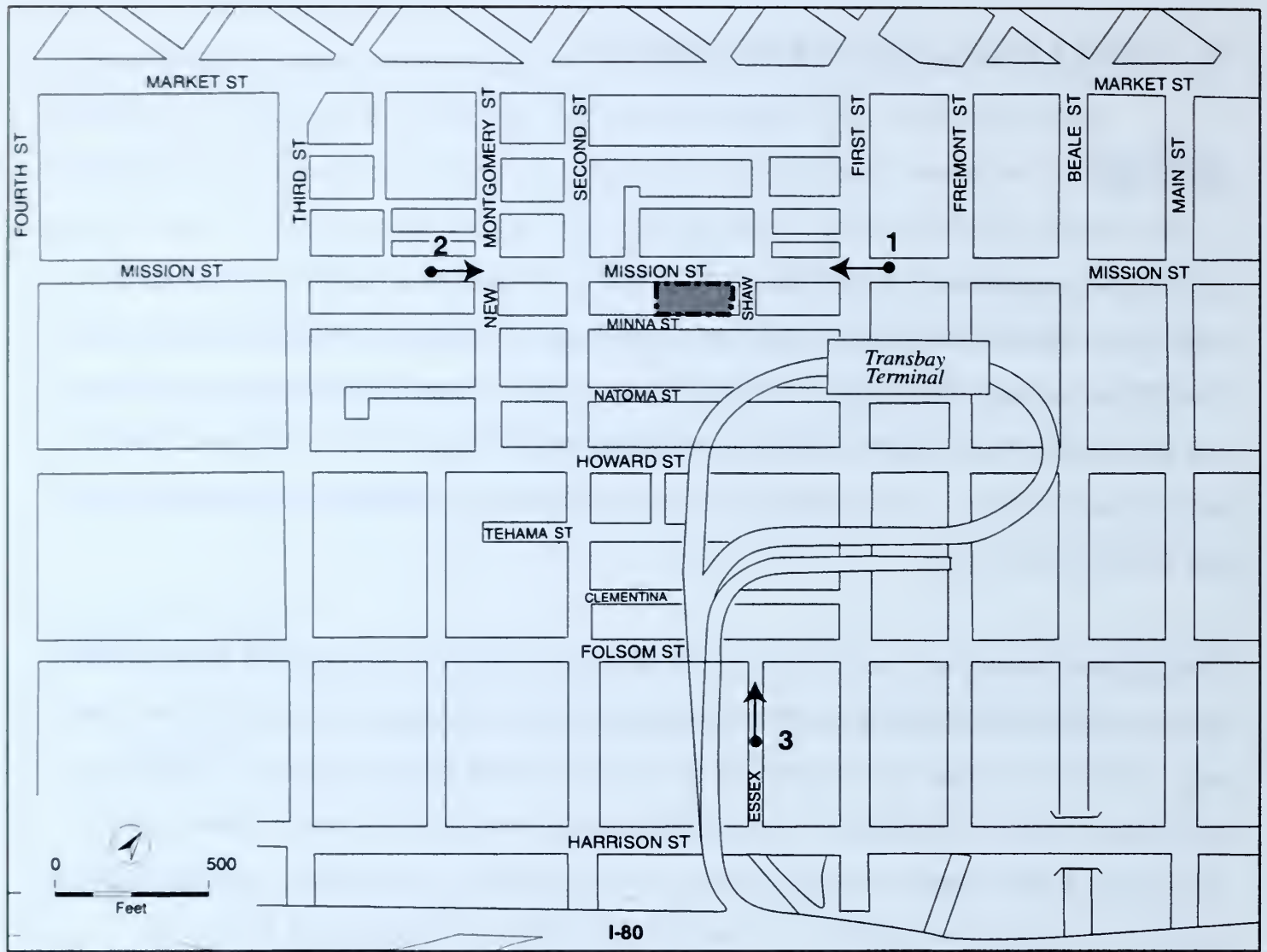
B. VISUAL QUALITY/URBAN DESIGN

SETTING

The existing project site is comprised of six buildings. These older brick buildings vary in height from three to four stories and are of a light-industrial character with ground-floor retail. The largest building on the project site, 561 Mission Street, housed Patrick & Co., an office and print supply shop. Patrick & Co. has relocated to 615 Mission Street, about one block west of the project site. The building has a renovated curtain wall facade with vertical light- and dark-blue striations.

Photographs showing representative views of the project site have been taken at three locations in the project vicinity (see Figure 7). As seen in Figure 8, existing views from Mission Street near First Street looking west towards the project site include a mix of high-rise and mid-rise office and commercial buildings. The buildings on the south side of Mission Street between Second and Third Streets are mostly three- to four-stories high. In contrast, buildings near the project site are high-rise buildings, such as 100 First Street and 101 Second Street. As discussed in Section III.A, Land Use, Zoning and Plan Consistency, the project vicinity is in transition from low-rise buildings built for the industrial and service industry to newer high-rise office towers. New office towers are predominately located east of Second Street. Several approved but as yet unbuilt buildings in the project vicinity are not shown in existing views, but are expected to be built in the near future. These buildings include 554 Mission Street, 535 Mission Street, and The Century residential tower. These buildings are included in the proposed views in Figures 8, 9, and 10, pp. 45, 46 and 48, respectively. From the vantage point shown in Figure 8, views of Yerba Buena Gardens and distant views of Twin Peaks are blocked by buildings on Mission Street.

Figure 9 shows the views on Mission Street looking east towards the project site near New Montgomery Street. High-rise buildings are the most predominant feature in these views.



SOURCE: EIP Associates

Legend



PROJECT SITE

3

VIEWPOINT LOCATION



555 MISSION STREET

FIGURE 7: VIEWPOINT LOCATIONS



EXISTING VIEW 1

PROPOSED VIEW 1

SOURCE: Square One Productions
 NOTE: The visual simulations illustrate height and massing for 554 Mission Street, 535 Mission Street, The Century and the proposed 555 Mission Street project but do not represent Architectural Design.



555 MISSION STREET

FIGURE 8: VIEW 1, LOOKING WEST FROM MISSION STREET NEAR FIRST STREET



SOURCE: Square One Productions
 NOTE: The visual simulations illustrate height and massing for 554 Mission Street, 535 Mission Street, The Century and the proposed 555 Mission Street project but do not represent Architectural Design.



555 MISSION STREET
FIGURE 9: VIEW 2, LOOKING EAST FROM MISSION STREET NEAR NEW MONTGOMERY STREET

These high-rise buildings include 101 Second Street, 100 First Street, and 201 Mission Street. Mid-rise buildings are interspersed with the high-rise buildings on the south side of Mission Street. From the vantage point shown in Figure 9, views of the Transbay Bus Terminal and the distant views of San Francisco Bay are obstructed by buildings along Mission Street.

Existing views looking north towards the project site (Figure 10) from Essex Street, south of Folsom, include the freeway bus ramp to the Transbay terminal loop, and views of high-rise office buildings in downtown San Francisco, such as 71 Stevenson Street, One Sansome Street, 575 Market Street, 44 Montgomery Street, 595 Market Street, and 101 Second Street (see Figure 10). From this location, views are characterized by high-rise office towers with lower scale development in the foreground.

IMPACTS

SIGNIFICANCE CRITERIA

San Francisco has no formally adopted significance criteria regarding visual quality and urban design. However, the project would generally be considered to have a significant effect on the environment if it would substantially degrade or obstruct a scenic view or vista currently enjoyed from publicly accessible open space, such as a public park, or obstruct an established view corridor identified for preservation in the *San Francisco General Plan*. A significant effect would also be identified if a project would result in a substantial, demonstrable negative aesthetic effect, or generate obtrusive light or glare.

As stated in the Initial Study, Appendix A, the project would not cause significant light or glare effects and hence, this impact will not be discussed in this EIR.



EXISTING VIEW 3



PROPOSED VIEW 3

SOURCE: Square One Productions

NOTE: The visual simulations illustrate height and massing for 554 Mission Street, The Century and the proposed 555 Mission Street project but do not represent Architectural Design.



555 MISSION STREET

FIGURE 10: VIEW 3, LOOKING NORTH FROM ESSEX STREET NEAR FOLSOM STREET

PROJECT EFFECTS

The proposed project would represent a distinct visual change, which would be apparent from streets, sidewalks, buildings, and public areas in the vicinity of the project site. The demolition of six two- to four-story buildings and the development of a 31-story building would change views in the immediate vicinity. The proposed 455-foot-tall project would be of comparable height and bulk to the newer buildings in the vicinity, mostly north and east of the project site. The project would be much taller than the buildings on Mission Street between Second and Third Streets, and buildings along Second Street in the New Montgomery-Second Street Conservation District. The project would be a part of the growing number of high-rise buildings located south of Market Street in the vicinity of the Transbay Terminal. The project would be similar in height to other approved buildings in the immediate vicinity, the 31-story 554 Mission Street office building, the 22-story 535 Mission Street building, and the 31-story Century residential tower on Minna Street. The proposed project would also be similar in height and bulk to other development in the nearby Financial District.

Visual simulations were developed from three selected view points. The simulations do not include architectural detailing, landscaping, or streetscape features that would be incorporated in the project. The visual simulations include other approved or under construction buildings in the vicinity of the project site: The Century, 554 Mission Street, and 535 Mission Street.

As noted above in the Setting section, the Mission Street streetscape includes a mix of high-rise and mid-rise buildings. As seen in the existing view of Mission Street near First Street looking west towards the project site (see Figure 8, p. 45), the proposed project would infill the break in the office tower frontage along this block of Mission Street. The proposed project would block existing views of the 101 Second Street building. The proposed building would not block views of Yerba Buena Gardens, views of Twin Peaks, or other public open space.

The proposed project would block some views of the 100 First Street building looking east on Mission Street near New Montgomery, as seen in Figure 9, p. 46. The proposed project would reinforce the dense urban form on Mission Street. The proposed building would not obstruct views of the San Francisco Bay or any scenic view towards the east.

Figure 10, p. 48, a view north from Essex Street south of Folsom Street, illustrates the long-range views to the project site. The proposed project would block views of 71 Stevenson Street, One Sansome Street, and 575 Market Street. Along with the other approved or under-construction buildings, the proposed project would be visible on the skyline from long-range vantage points south of the project. The public areas in the vicinity of the project site that could be affected by a visual impact include Yerba Buena Gardens, about one and a half blocks west on Mission Street; the plaza at the Transbay Bus Terminal, about a block east of the project site; and Union Square, nearly five blocks away. The project would be visible from Yerba Buena Gardens and the Transbay Terminal, but only against a backdrop of other high-rise buildings. The proposed project would not substantially alter views because it would be part of a large group of buildings of generally comparable height and bulk. Views from Union Square down Geary Street would include only the uppermost portion of the project because of intervening buildings.

The project would also be visible from publicly accessible, privately owned open spaces, including the 100 First Street Plaza on Mission Street, the Golden Gate University entry plaza, the proposed plaza at 554 Mission Street, open space at 71 Stevenson Street, and Chevron Plaza between Market and Stevenson Streets. The project would not obstruct any significant views from these plazas. The project would appear against a backdrop of other high-rise buildings from long-range vantage points, such as Rincon Hill, Potrero Hill and Twin Peaks.

The project would be constructed within an increasingly densely built urban area. The proposed project involves demolition of six buildings mostly two to four stories in height to build a 31-story building. Although the additional height would be visible from surrounding

buildings, the project would not significantly obstruct any publicly accessible scenic views or have a substantial adverse effect on a scenic vista or established view corridor.

In summary, the project would not substantially degrade the existing visual character or quality of the area, or result in a substantial, demonstrable negative aesthetic effect.

C. SHADOWS AND WIND

SHADOWS

SETTING

Open space in the vicinity of the project site consists of both private and publicly accessible plazas and sitting areas associated with various buildings. In the project vicinity, Union Square, between Post and Geary Streets and Powell and Stockton Streets, is to the northwest of the project site; Justin Herman Plaza, northeast of the project site, is at the foot of Market Street on The Embarcadero; and St. Mary's Square, between California and Pine Streets and Grant Avenue and Kearny Streets, is to the northwest of the project site. These plazas are public spaces under the jurisdiction of the Recreation and Park Commission and thus are subject to Section 295 of the San Francisco Planning Code regarding shadow of public open spaces. Yerba Buena Gardens, southwest of the site, within the Yerba Buena Redevelopment Area, is owned by the Redevelopment Agency and maintained by the Moscone Convention Center; Hallidie Plaza, southwest of the project site, is owned by the Department of Real Estate; and the Transbay Bus Terminal Plaza, southeast of the site, is state owned. The proposed and approved Rincon Point Park, southeast of the site along San Francisco Bay, is under the jurisdiction of the Redevelopment Agency and the Port (see Figure 11). Publicly accessible, privately owned open spaces in the vicinity of the proposed project site include the entry plaza in front of Golden Gate University across the proposed project site on Mission Street, the rooftop plaza above the parking garage adjacent to 100 First Street, the approved but not yet constructed plaza at 554 Mission Street and similar open space adjacent to 535 Mission Street and Shaw Alley, the open space at 71 Stevenson Street, and Chevron Plaza between Market and Stevenson Streets.

The existing, two- to six-story buildings on the project site cast shadows on streets and sidewalks in the project vicinity and on some of the privately owned open spaces, such as



SOURCE: CADP, Inc.

Public Open Spaces

- | | |
|---------------------------|-----------------------|
| ① ST. MARY'S SQUARE | ④ RINCON POINT PARK |
| ② TRANSBAY TERMINAL PLAZA | ⑤ YERBA BUENA GARDENS |
| ③ JUSTIN HERMAN PLAZA | ⑥ UNION SQUARE |



555 MISSION STREET

FIGURE II: PROPOSED PROJECT YEAR-ROUND SHADOW TRACE

Golden Gate University entry plaza. Existing shadows created on the project site do not reach nearby public open spaces during mid-morning to mid-afternoon hours (10:00 a.m. and 3:00 p.m.).

IMPACTS

Significance Criteria

Planning Code Section 295, the Sunlight Ordinance, was adopted in 1984 pursuant to voter approval of Proposition K to protect certain public open spaces from shadowing by new structures. Section 295 generally prohibits the issuance of building permits for structures over 40 feet in height that would shade property under the jurisdiction of the Recreation and Park Commission during the period from one hour after sunrise to one hour before sunset, at any time of the year, unless the City Planning Commission, in consultation with the General Manager of the Recreation and Park Commission, determines that such shade would not have a significant impact on the use of such property. Thus, a project would have a significant effect if it would result in substantial new shadow on public open space under the jurisdiction of the Recreation and Park Commission during these hours.

Project Effects

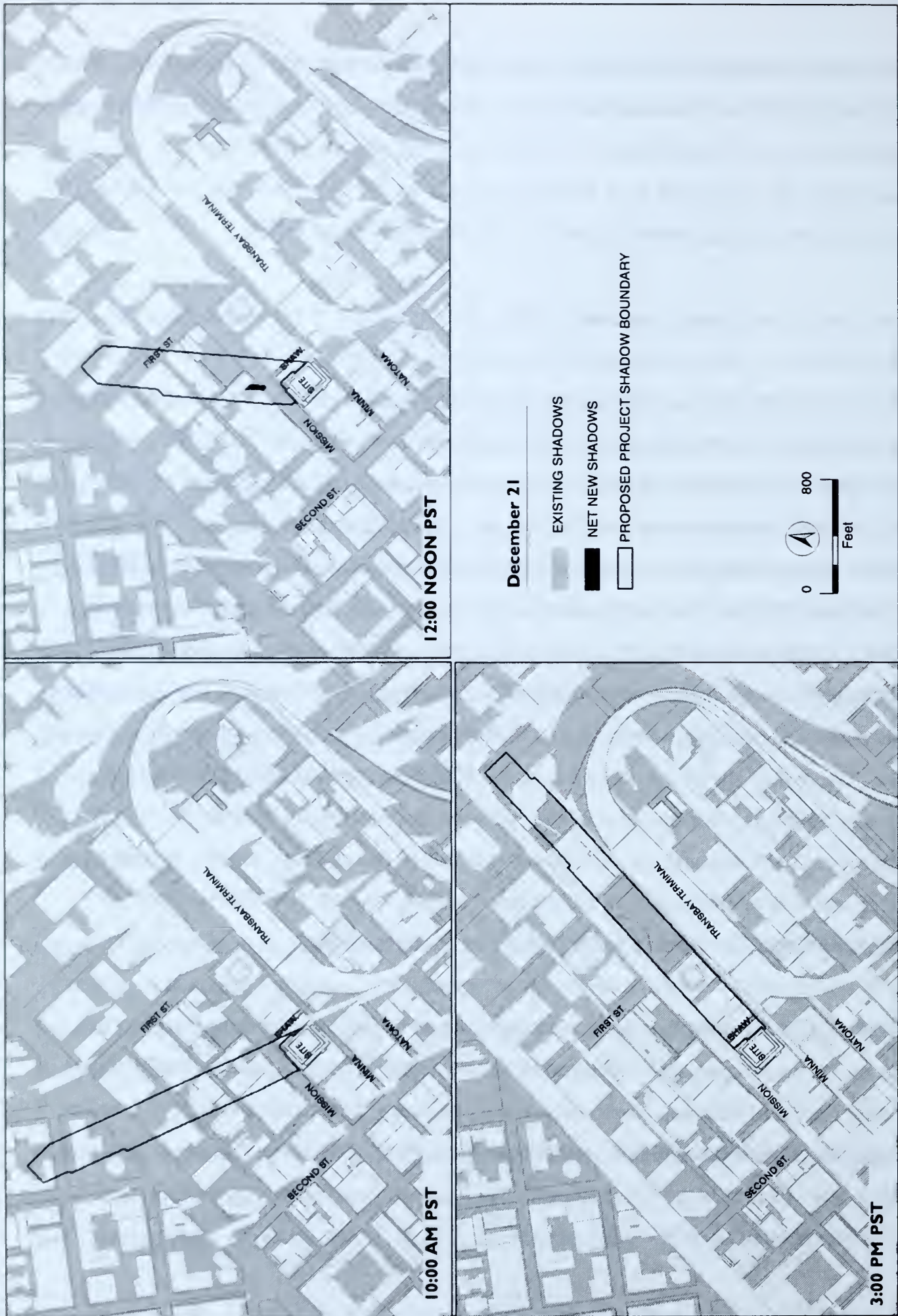
Figure 11 shows the maximum extent of the proposed project's shadow as though there were no existing intervening buildings. The shadow would extend to Union Square and St. Mary's Square at some time of the year, not taking existing shadow into account. However, Justin Herman Plaza would not be shaded at any time of the year.

Public open spaces not covered by Section 295, including Yerba Buena Gardens, Hallidie Plaza, and Rincon Park, would not have any shadow impacts due to the project. The Transbay Bus Terminal plaza would be within the effective shadow area. Other publicly accessible

privately owned open spaces that would be in the shadow impact range of the proposed project include the Golden Gate University entry plaza, the rooftop plaza adjacent to 100 First Street, the approved but not yet built plaza at 554 Mission Street and similar open space at 535 Mission Street, the open space at 71 Stevenson Street, the Chevron Plaza between Market and Stevenson Streets, and the pedestrian plaza proposed as part of the project.

Shadow patterns for existing, proposed, and approved buildings in the project area (including existing buildings on site) and the project are shown in Figures 12-15 for representative times of the day during the four seasons: during winter and summer solstices, when the sun is at its lowest and highest, and during spring and fall equinoxes, when the sun is at its midpoint. Shadow conditions from July through December mirror conditions from January through June (notwithstanding daylight saving time). The times selected for analysis include 10:00 AM, 12:00 PM, and 3:00 PM Pacific Standard Time (PST) in March and December, and Pacific Daylight Time (PDT) in June and September. The analysis includes shadow cast on streets, sidewalks, pedestrian areas, and open space in the area of potential project impact. The diagrams show existing and approved building shadow in a lighter shading. The proposed project's shadow boundary is outlined, and in darker shading, net new shade resulting from the project. The outline shows the maximum shade, as if there were no existing shade from intervening buildings. For purposes of this analysis, existing shadow in these figures includes the current built environment and the shadow that will be cast by three projects that are approved and will be constructed in the proposed project vicinity: 554 Mission Street, 535 Mission Street, and The Century residential tower on Minna Street.

The shadow analyses show that there would not be any net new shading from the proposed project on the public open spaces covered by Section 295 (St. Mary's Square, Union Square, and Justin Herman Plaza) and other public spaces including Yerba Buena Gardens, Transbay Bus Terminal Plaza, Hallidie Plaza, and Rincon Point Park. Therefore, the discussion below



SOURCE CADR, Inc.

EIP
ASSOCIATES

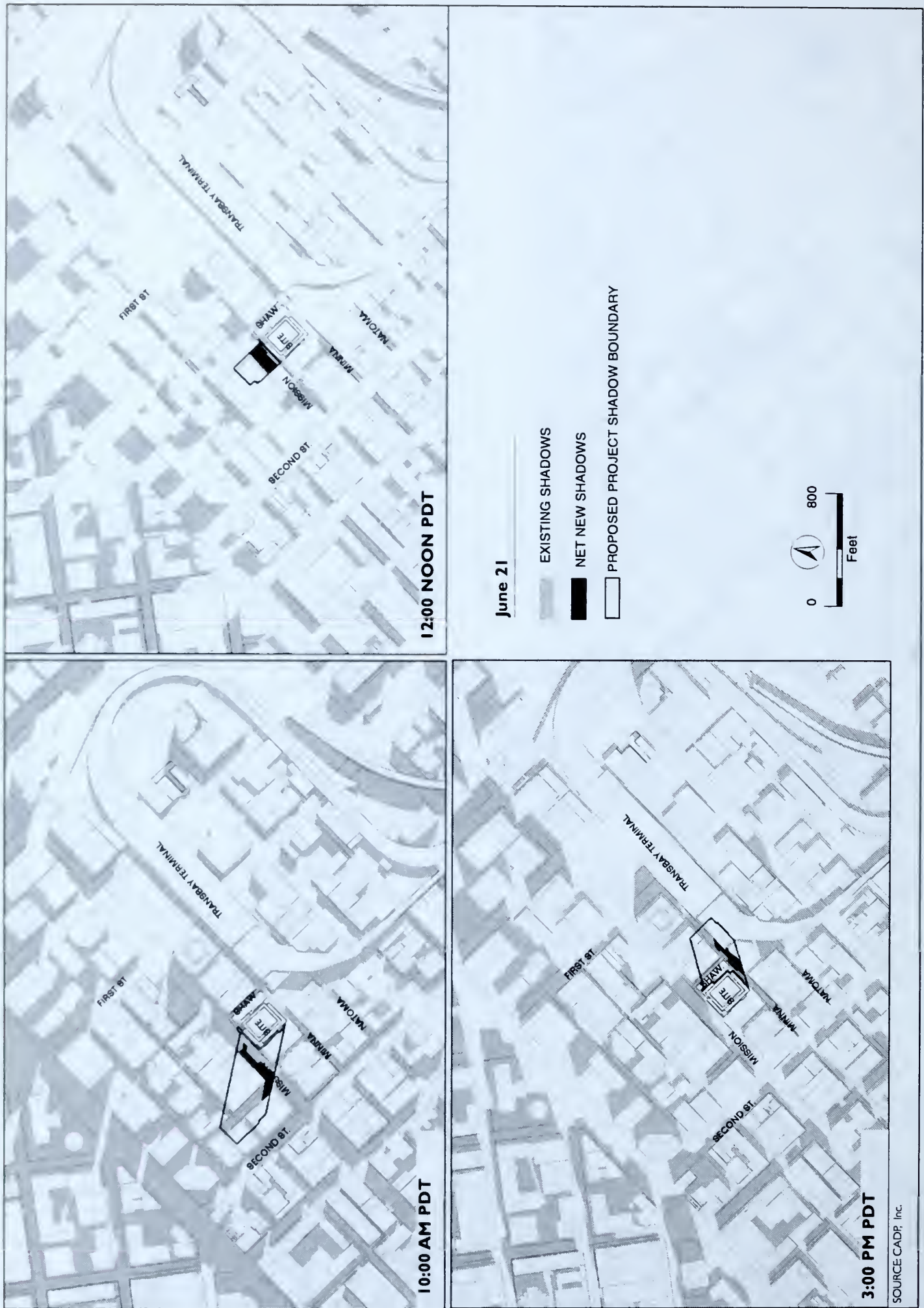
555 MISSION STREET
FIGURE 12: SHADOW PATTERNS - DECEMBER 21 (10 A.M., NOON, 3 P.M. PST)



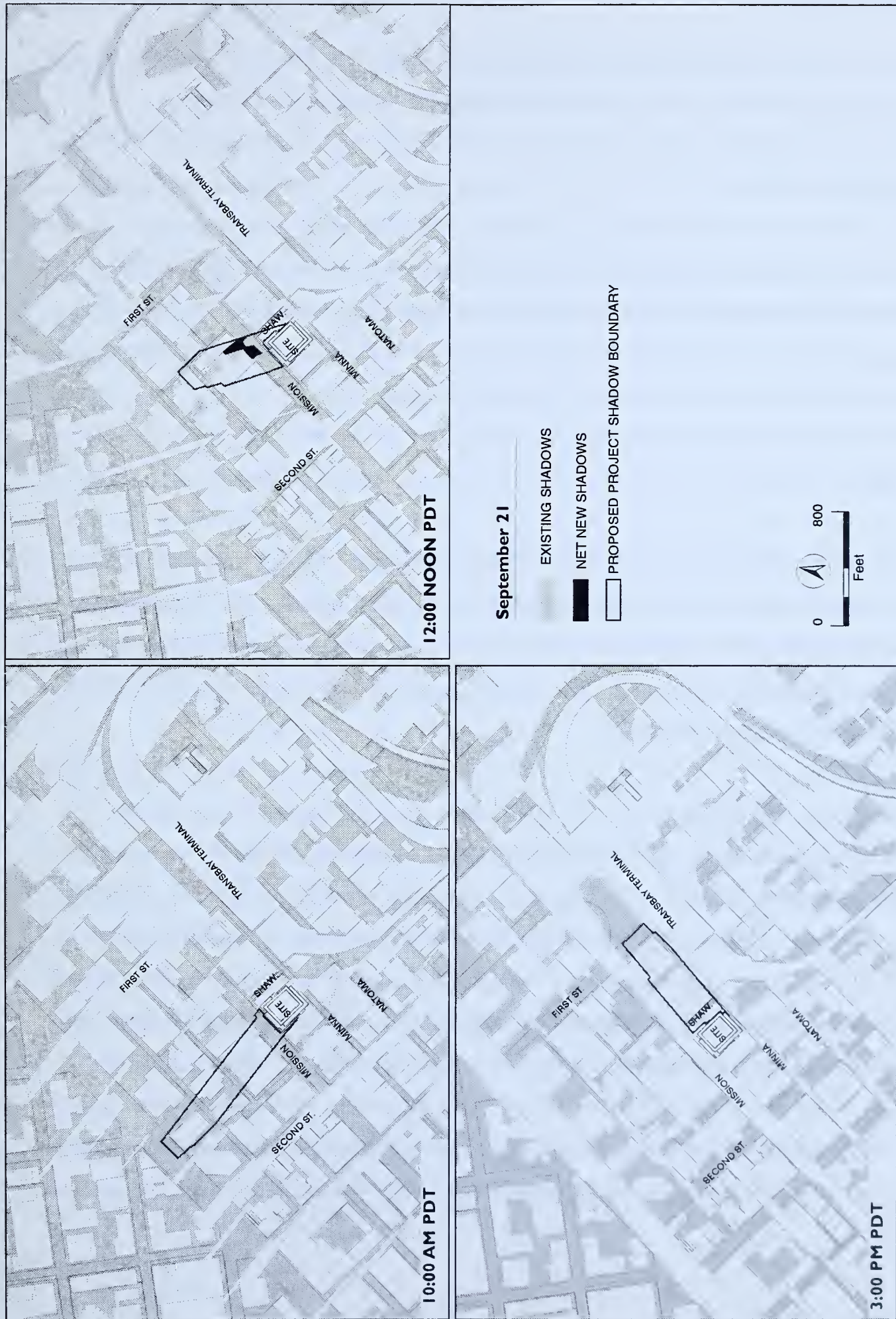
SOURCE: CADP, INC.



555 MISSION STREET
FIGURE 13: SHADOW PATTERNS - MARCH 21 (10 A.M., NOON, 3 P.M. PST)



555 MISSION STREET
FIGURE 14: SHADOW PATTERNS - JUNE 21 (10 A.M., NOON, 3 P.M. PDT)



SOURCE: CADP, Inc.



555 MISSION STREET

FIGURE 15: SHADOW PATTERNS - SEPTEMBER 21 (10 A.M., NOON, 3 P.M. PDT)

focuses only on the other open spaces, including the Transbay Bus Terminal Plaza, Golden Gate University entry plaza, and streets and sidewalks for informational purposes.¹

December 21

At 10:00 AM and noon on December 21, the proposed project would shade up to 60 feet of Mission Street including the sidewalks, mostly along the Golden Gate University building and the proposed project. At 3:00 PM, the project would not cast any net new shade. Project shade would not reach any other public or private open space.

March 21

At 10:00 AM on March 21, about 75 feet of Mission Street including the sidewalks, near the approved 554 Mission Street Building, Golden Gate University, and the proposed project building would be shaded. Net new shadow from the proposed project would also shade the eastern edge of the proposed project. Project shade would not result in any net new shade on any other public or private open space.

At noon, about 1,250 square feet of the Golden Gate University's entry plaza would be affected by net new shadow from the proposed project. The northern half of Mission Street, the sidewalks on the north side of Mission Street along the Golden Gate University building, and the proposed building at 554 Mission Street would be shaded by a 180-foot-long new shadow. About 50 feet of the sidewalk on the south side of Mission Street along the proposed project building would also be newly shaded. A line of net new shadow about five feet wide would be formed on the eastern edge of the proposed project plaza.

At 3:00 PM, the project would not result in any net new shade other than the existing shade. The project would not shade any other existing or approved open space.

June 21st

At 10:00 AM on June 21, the proposed project would shade almost half of its proposed plaza area, about 7,500 square feet. New shade would affect about 200 feet on Mission Street in front of the proposed project site and the building on 101 Second Street on the southern side of Mission Street, 200 feet of sidewalk along the building on 554 Mission Street on the northern side of Mission Street, and 50 feet of sidewalk along the building on 85 Second Street on the eastern side of Anthony Alley.

At noon, about 125 feet of Mission Street, including the sidewalk along the proposed project building and the building on 554 Mission Street, would be shaded by the proposed project.

At 3:00 PM, 200 feet of Minna Street, including the sidewalks and about 150 feet in front of the surface parking lot adjacent to the Transbay Bus Terminal would be shaded by new shadows due to the proposed project. No other open spaces would be affected by the proposed project.

September 21

At 10:00 AM on September 21, about 750 square feet of the eastern edge of the project plaza area would be shaded by the proposed project. New shadow from the proposed project would also affect Mission Street, including the sidewalk along 554 Mission Street.

At noon, the proposed project would cast a new shadow on about 1,625 square feet of the Golden Gate University entry plaza. The proposed project would shade about 50 feet of Mission Street in front of the project site. The project would also shade a 100-foot-long sidewalk on the northern edge of Mission Street fronting the Golden Gate University and a 50-foot-long sidewalk area on the south side of Mission Street.

At 3:00 PM, the proposed project would cast net new shadow on the sidewalk along Minna Street fronting 535 Mission Street and 100 First Street. The shadow would be 275 feet long and five feet wide. No other shadows would be cast over streets, sidewalks, pedestrian plazas, or open spaces.

Summary

The project would not cast shadows on any public open spaces, including those covered under Section 295. Some portions of the street and sidewalk on Mission Street near the proposed project site would be shaded during midday periods. The proposed project plaza would be partially shaded at certain times of the day and during certain seasons. The sidewalk on Mission Street in front of Golden Gate University and the Golden Gate University entry plaza would also be shaded by the proposed project. These would not be considered significant shadow effects pursuant to adopted criteria in Section 295 of the Planning Code.

WIND

SETTING

U.S. Weather Bureau and Bay Area Air Quality Management District data show that westerly (i.e., from the west) to northwesterly winds are the most frequent and strongest winds during all seasons in San Francisco.² Of the 16 primary wind directions measured at a Weather Bureau Station at the United Nations Plaza (at a height of 132 feet), four directions occur most frequently and account for most of the strongest winds: northwest, west-northwest, west, and west-southwest. Calm conditions occur about 2% of the time. Average wind speeds are highest during summer and lowest during winter. The strongest peak winds, however, occur during winter, when speeds of up to 47 miles per hour (mph) have been recorded.³ Typically the highest wind speeds occur during the mid-afternoon hours, and the lowest occur during early morning hours.

Wind conditions affect pedestrian comfort on sidewalks and in other public areas. The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed. Winds up to 4 miles per hour have no noticeable effect on pedestrian comfort. With winds from 4 to 8 miles per hour, wind is felt on the face. Winds from 8 to 13 miles per hour disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. Winds from 13 to 19 miles per hour raise loose paper, dust, and dry soil, and disarrange hair. The force of winds from 19 to 26 miles per hour is felt on the body. With winds of 26 to 34 miles per hour, umbrellas are used with difficulty, hair is blown straight, walking steadily is difficult, and wind noise is unpleasant. Winds over 34 miles per hour make it difficult for a person to maintain balance, and gusts can blow a person over.

Large buildings can redirect wind flows around and down to street level, resulting in increased wind speed and turbulence at street level. To provide a comfortable wind environment for San Franciscans, the City established specific comfort criteria for evaluation of proposed buildings. The Planning Code specifically outlines these criteria for the Downtown Commercial (C-3) Districts and for the Rincon Hill area, Van Ness Avenue area, and part of the South of Market Area.⁴ The entire project site is within the C-3-O (Downtown Office) zoning district. For this district, Section 148(a) of the Planning Code requires that structures be designed to meet pedestrian comfort criteria. In administering Section 148, the Planning Department requires a microclimate analysis, including wind tunnel testing for tall buildings, to determine design-specific impacts on pedestrian comfort and to provide a basis for design modifications to mitigate these impacts if they are significant.

The comfort criteria are based on pedestrian level wind speeds that include the effects of turbulence. These adjusted wind speeds are referred to as “equivalent wind speeds.” Section 148 of the Planning Code establishes an equivalent wind speed of 7 miles per hour in public seating areas and 11 miles per hour in areas of substantial pedestrian use as comfort criteria. New buildings and additions to buildings may not cause ground-level winds to exceed these levels more than 10% of the time year round between 7:00 AM and 6:00 PM.⁵ According to

the Planning Code, if existing wind speeds exceed the comfort level or when a proposed building or addition may cause ambient speed to exceed the criteria, new buildings and additions must be designed to reduce ambient wind speeds to meet these requirements, unless the requirements for an allowable exception as described in Section 148 are met. Compliance with Section 148 would be considered as part of the project review process. As described below under Impacts, the comfort criteria are currently exceeded at 10 of 33 test locations for existing conditions. Three of the 33 test locations are designated as seating areas.

Section 148 of the Planning Code also establishes as a hazard criterion an equivalent wind speed of 26 miles per hour for a single full hour per year. No building or addition would be permitted that would cause wind speeds to exceed the hazard level of more than one hour of any year. No exception may be granted to this criterion. As described further below, the hazard criterion is not exceeded under existing conditions at any of the 33 test locations.

IMPACTS

Significance Criteria

A project that would cause equivalent wind speeds to reach or exceed 26 miles per hour for a single full hour of the year, thus creating new exceedances of the hazard criterion established in San Francisco Planning Code Section 148, would be considered to have a significant impact. A project that would cause exceedances of the comfort standards described above would not be considered to have a significant impact, although by design, projects are required to reduce exceedances to the extent feasible.

Project Effects

Using a wind tunnel and a scale model of the downtown San Francisco and South of Market areas surrounding the project site, wind speed measurements were made at 33 existing test locations and 37 project-condition test locations (see Figure 16, p. 66).⁶ The additional four

locations were included in the proposed plaza area of the project. The final design of the new project plaza is not complete, but would be expected to include some public seating. The wind tunnel tests followed Planning Code Section 148 methodology. Tests were conducted for the project site under existing conditions, conditions with the proposed project, and conditions with the proposed project and other cumulative projects (approved but not yet constructed). Appendix B presents the test report, which discusses methodology and results in more detail.

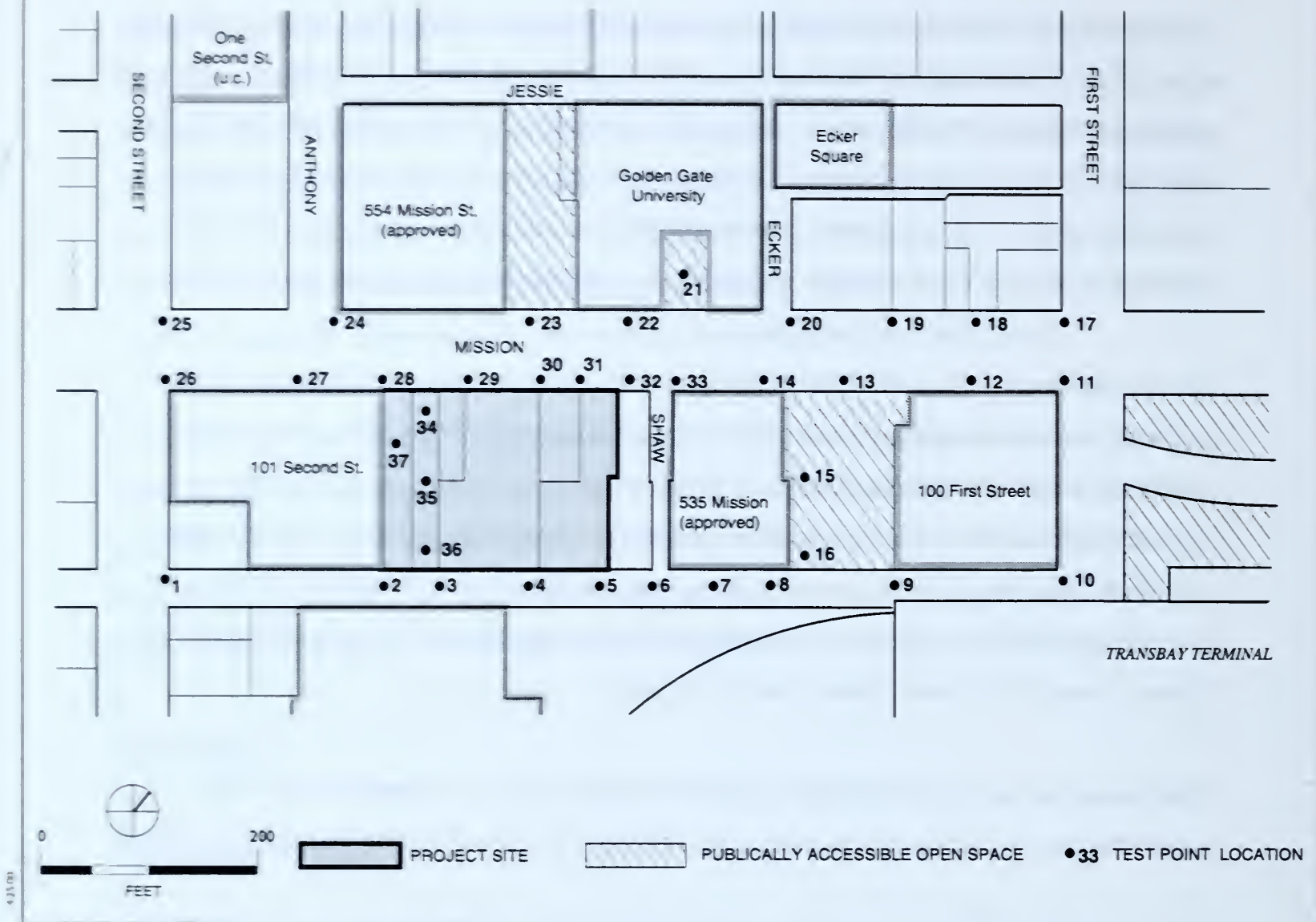
The existing conditions included the buildings and structures existing on the project site and in the project vicinity including those recently completed or under construction. The recently completed 101 Second Street Building, W Hotel at Third and Howard, and the under-construction Related Co. Building at Third and Mission were each included in the existing conditions. Buildings that are approved but not yet completed were included in the tests for the future cumulative conditions. These include One Second Street, 554 Mission Street, 535 Mission Street, 524 Howard Street, and The Century.

Wind speeds do not exceed 26 mph for more than one hour per year under the existing conditions; however, wind speeds exceed the comfort criteria at 10 of the 33 points considered.

Of the 10 locations where the comfort criteria are exceeded, nine are pedestrian location and one is a seating location. Four pedestrian locations near First and Mission and First and Minna (locations 9, 10, 11, and 17, as shown in Figure 16), and five pedestrian locations along Mission in front of the project site and 101 Second (locations 22, 27, 28, 29, and 30) exceed the 11 mph criterion. The 7 mph seating area criterion is exceeded in the public area adjacent to 100 First Street (location 16).

Project Conditions

The proposed project would generally increase wind speeds in the area compared to existing conditions. With the project, 20 of the 33 existing test locations would exceed the comfort



SOURCE: EIP Associates



555 MISSION STREET

FIGURE 16: WIND STUDY MEASUREMENT LOCATIONS

criteria, as compared to 10 test locations exceeding under existing conditions. Wind at the four plaza locations would be above the 7 mph seating area comfort criterion. The range of wind speeds with the project would be similar to existing conditions; they would range from 3 to 16 miles per hour over 10% of the time using the comfort criteria methodology (see Appendix B, p. B.1).

Compared to the existing conditions, the project would remove one existing exceedance of the 11 mph pedestrian use comfort criterion (location 10) and add eleven exceedances at other locations around the site. The new pedestrian use criterion exceedances are on Minna Street south of the project (locations 2 and 5), along Mission Street between Shaw Alley and First Street (locations 11, 12, 13, 14, and 17), and on the project frontage on Mission Street (locations 23, 25, 31, and 32). The existing exceedance in the seating area in the 100 First Street plaza would continue (location 16), and the project would add a new exceedance of the 7 mph seating area criterion on location 15. The four locations in the project plaza would be above the seating area criterion with the project (locations 34, 35, 36, and 37). At these locations, wind speeds using the comfort criteria methodology would be between 13 and 16 mph.

Wind speed increases associated with the project would be greatest at two separate locations. At one location on Minna Street near the southeastern corner of the project (location 5) and at one location on Mission Street adjacent to the 100 First Street building (location 13), winds would increase by 7 mph, from 8 to 15 mph and from 6 to 13 mph, respectively. As with the existing conditions, there would be no exceedances of the 26 mph hazardous wind criterion with the proposed project, and thus, no significant wind impact.

Project Conditions plus Cumulative Development

Development of the proposed project with anticipated future projects would cause variable wind effects in the area when compared to existing conditions. The resulting wind speeds

would range from 2 to 16 miles per hour using the comfort criteria methodology. This would be a wider range of speeds than under existing and project conditions. With the project plus cumulative development, 17 of the 33 existing test locations would exceed the comfort criteria. This number of exceedances would be fewer than under existing-plus-project conditions, and the locations of the exceedances would change. Two of the new plaza locations would exceed the 7 mph seating area comfort criterion, where all four of the locations would exceed the under project conditions alone.

Compared to the existing conditions, the project plus cumulative development would remove two existing exceedances of the pedestrian use criterion on Minna Street near First (locations 9 and 10) and add exceedances of the pedestrian use criterion at one location on Minna Street adjacent to the project (location 3), at four locations on Mission Street near the 100 First Street plaza (locations 13, 14, 19, and 20), and on Mission Street between the project and Second Street (locations 23, 24, 31, 32, and 33). Existing exceedances at two pedestrian locations at First and Mission (locations 11, and 17) and at five pedestrian locations along Mission in front of the project site and 101 Second Street (locations 22, 27, 28, 29, and 30) would remain with the project plus cumulative development. With cumulative development, wind speeds at two of the four new project plaza locations would exceed the 7 mph criterion for seating areas (locations 34 and 36). The wind speeds at the four seating locations would range from 7 mph to 14 mph.

The highest wind speeds with the project plus cumulative development (up to 17 mph using the comfort criteria methodology) would occur at three locations on the southern sidewalk of Mission Street (locations 14, 31, and 32). As with the existing conditions and the conditions with the project alone, there would be no exceedances of the 26 mph hazardous wind criterion with the project plus cumulative development and, thus, no significant wind impact.

NOTES - Shadow and Wind

1. By convention, “east” and “west” refer to the direction of Mission and Minna streets are parallel streets. “North” and “south” refer to the direction of Second Street and parallel streets. As shown in Figure 11, true north is about 45 degrees clockwise from the Second Street alignment.
2. The U.S. Weather Bureau data used in this analysis were gathered at a weather station atop the Old Federal Building at 50 United Nations Plaza during the years 1945 through 1950. During each of these years, data were taken hourly for 16 wind directions. The database, consisting of 32,795 hourly observations, is of sufficient size to provide a reliable estimate of future wind conditions in San Francisco.
3. E. Jan Null, Climate of San Francisco, NOAA Technical Memorandum, *NWS WR-126*, February 1978.
4. Planning Code, Section 148, 249.1(3), 243(c)(9), 263.11(c).
5. The Planning Code specifies the hours of 7:00 a.m. to 6:00 p.m. The available weather data cover the hours of 6:00 a.m. to 8:00 p.m. Therefore, observations from two additional evening hours and one additional morning hour are included in these data.
6. Donald Ballanti, Certified Consulting Meteorologist, *Wind Tunnel Analysis for the Proposed 555 Mission Street Project*, San Francisco, prepared for EIP Associates, April 2000.

D. TRANSPORTATION¹

SETTING

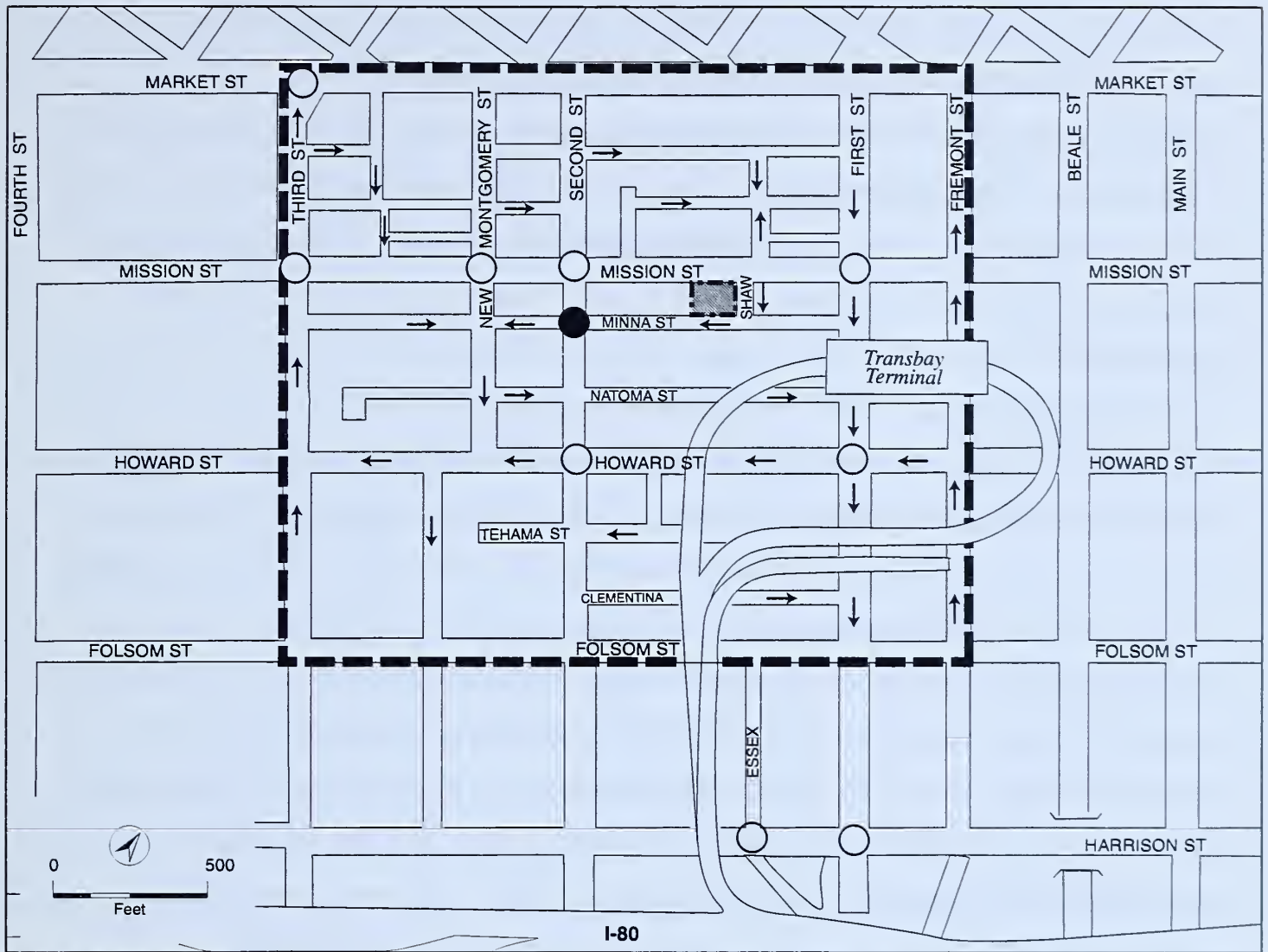
TRAFFIC

Regional access to and from the project vicinity is available via Interstate 80 (I-80), US 101, and Interstate 280 (I-280). Traffic coming from or heading toward the East Bay would use I-80 and the Bay Bridge, exiting at the off-ramp on Fremont Street or using the on-ramps on Harrison at First or Essex Streets. Traffic coming from or going to the North Bay would use Lombard Street which is designated as US 101 in the northern part of San Francisco, and either Van Ness and Mission, or Bay Street and The Embarcadero. Traffic with origins or destinations in the South Bay would take US 101 South or I-280. US 101 Southbound on-ramps are located at Fourth and Bryant Street and off-ramps are located at Fourth and Harrison Streets. I-280 terminates southwest of the project site. It has on- and off-ramps at Sixth and Brannan Streets and on King between Fourth and Fifth Streets.






Figure 17 shows the Transportation Study Area, which encompasses a several-block radius around the project site and includes streets and intersections most likely to be affected by project-generated traffic.

The proposed project fronts onto the south side of Mission Street between Shaw Alley and Second Street. The streets in the project vicinity are Market, Mission, Fremont, First, Minna, Second, and Howard Streets. Vehicular access to the 555 Mission loading docks and on-site parking facilities would be available from Minna Street (see Figure 2, p. 26).

Market Street is the main spine of downtown San Francisco running southwest and northeast and extending from Steuart Street at Justin Herman Plaza to Portola Drive in the Twin Peaks area. Market Street is a two-way, four-lane street, and a major transit corridor with BART and Muni Metro service operating underground and the historic streetcar F-line and numerous bus lines operating at the surface level. Market Street is designated by the *San Francisco*



Legend

-  PROJECT SITE
-  STUDY AREA BOUNDARIES
-  SIGNALIZED
-  UNSIGNALIZED
-  DIRECTION OF ONE-WAY STREET



555 MISSION STREET

FIGURE 17: PROJECT STUDY AREA BOUNDARIES

General Plan as a Major Arterial between Franklin and Castro Streets and as a Transit Preferential Street (Primary Transit Street) between Castro and Steuart Street. It is also identified as a Citywide Pedestrian Network Street, a Neighborhood Commercial Pedestrian Street, and a Citywide Bicycle Route between Castro and Steuart Streets. The sidewalks on both sides vary between 25 and 31 feet wide. In the downtown area, parking is prohibited on both sides of the street. Only passenger loading and deliveries are allowed in designated loading zones.

Mission Street is a two-way, four-lane street that connects the Mission District with downtown San Francisco. It runs in the east-west direction from The Embarcadero to South Van Ness Avenue. From South Van Ness Avenue to Daly City, Mission Street runs in the north-south direction. Mission Street has one dedicated right-turn and bus lane (weekdays only) between Main and Third Streets in the westbound direction and between Third and Beale Streets in the eastbound direction. In the afternoon peak (4:00 to 6:00 PM), the westbound bus lane is extended to Eleventh Street. Mission Street is designated by the *San Francisco General Plan* as a Transit-Preferential Street (Primary Transit Street), a Citywide Pedestrian Network Street, and a Neighborhood Commercial Pedestrian Street. There is on-street metered parking permitted on both sides of the street except during the afternoon peak period (4:00 to 6:00 PM).

Fremont and First Streets operate as a one-way couplet south of Market Street. Fremont Street operates in the northbound direction between Harrison and Market Streets, carrying traffic from the I-80 off-ramp and South of Market area to the downtown. First Street operates in the southbound direction between Market Street and the I-80 on-ramp. It carries traffic to the Transbay Transit Terminal and to the I-80 on-ramp. Both streets have three to four travel lanes and are designated as Major Arterial Roads in the *San Francisco General Plan*. On-street metered parking is available on both sides of Fremont and First Streets. Stopping is prohibited on weekdays between 3:00 and 7:00 PM on First Street and between 3:00 and 6:00 PM on Fremont Street.

Minna Street, 21 feet curb-to-curb, operates as a one-way street with one lane in the westbound direction. There are six-foot sidewalks on both sides of the street and on-street metered parking on the north side. Access to Minna Street is available from Mission Street via Shaw Alley, or southbound First Street to Minna. Shaw Alley is a one-way street from Mission to Minna, about half way between First and Second Streets.

Second Street is a two-way, four-lane street that operates in the north-south direction and has 18-foot-wide sidewalks on both sides. It is identified by the *San Francisco General Plan* as a Secondary Transit Preferential Street between Howard and Harrison Streets, as well as a Neighborhood Commercial Pedestrian Street and Citywide Bicycle Route. On-street metered parking is permitted on both sides of the street.

Howard Street runs in the east-west direction between The Embarcadero and South Van Ness Avenue. It operates one way westbound with four lanes between Fremont Street and South Van Ness Avenue and operates two way between Fremont and The Embarcadero. Howard Street is one of the main westbound connectors to the I-80 ramps in the South of Market area. It is identified in the *San Francisco General Plan* as a Major Arterial and Citywide Bicycle Route. On-street parking, most of which is metered, is available on both sides of the street. On-street parking is prohibited on the north side during the afternoon peak period (4:00 to 6:00 PM) to allow the curb lane to operate as a fifth travel lane.

Intersection Level of Service

Intersection operations are often described by Level of Service (LOS) which is a qualitative measure based on the average delay experienced by vehicles moving through the intersection. LOS A indicates free flow conditions with little or no delay, while LOS F indicates heavily congested conditions with extended delays. The *1994 Highway Capacity Manual* definitions for signalized and unsignalized intersection levels of service are provided in Appendix D. The City and County of San Francisco has identified LOS A through LOS D as acceptable

intersection levels of service, while LOS E and LOS F are considered unacceptable levels of service.

Ten study intersections were analyzed for the weekday PM peak hour to determine the level of service at which they operate under existing conditions. Traffic volumes were counted at five of the ten intersections on November 16, 1999 during the afternoon peak period (4:00 to 6:00 PM). Volumes for the remaining intersections, collected on January 28, February 9, and May 18, 1999, were obtained from three previous transportation studies.² The existing intersection levels of service are presented in Table 2, p. 84.

Under existing conditions, the intersections of Third and Market Streets, First and Harrison Streets, and Essex and Harrison Streets operate at LOS F during the weekday PM peak hour. The intersections of Third and Mission Streets, First and Mission Streets, and First and Howard Streets operate at LOS E. The intersections of New Montgomery and Mission Streets, Second and Mission Streets, and Second and Howard Streets operate at LOS C, while the unsignalized intersection at Second and Minna Streets operates at LOS B (represents the worst approach or the one-way, westbound Minna Street approach).

Traffic volumes are heaviest along the corridors that lead to the regional freeway on-ramps, such as First Street, and along corridors which cross Market Street, such as Third Street. Vehicles approaching the I-80 and Bay Bridge on-ramps at First and Harrison Streets and Essex and Harrison Streets often form long queues along First Street and Harrison Street. Traffic on First Street generally extends from the on-ramp to Folsom Street, but may also reach as far north as Market Street during periods of extremely heavy congestion. The Department of Parking and Traffic manually adjusts the timing of the signal at First and Harrison Streets when necessary to prevent queues on First Street from extending to First and Mission Streets. Those queues can cause delays to transit vehicles that are approaching the Transbay Transit Terminal, resulting in severe congestion on Mission Street and Market Street and other streets with transit routes.

Traffic approaching the I-80 and Bay Bridge on-ramp at First and Harrison travelling westbound on Harrison frequently forms queues that extend to The Embarcadero during the PM peak period. Traffic approaching the Essex and Harrison Streets on-ramp travelling westbound on Harrison frequently forms queues that back up to Second or Third Street, while southbound traffic on Essex will back up to the Second and Folsom intersection. Second Street also leads to the Sterling Street high-occupancy vehicle (HOV) on-ramp via Bryant Street.

High volumes of traffic destined for Union Square, Chinatown, and North Beach during the PM peak hour lead to congested conditions along Third Street. The queues at the Third and Market Streets intersection often back up to Mission Street and southward. High volumes of pedestrian and bus traffic also contribute to the congestion along Third Street.

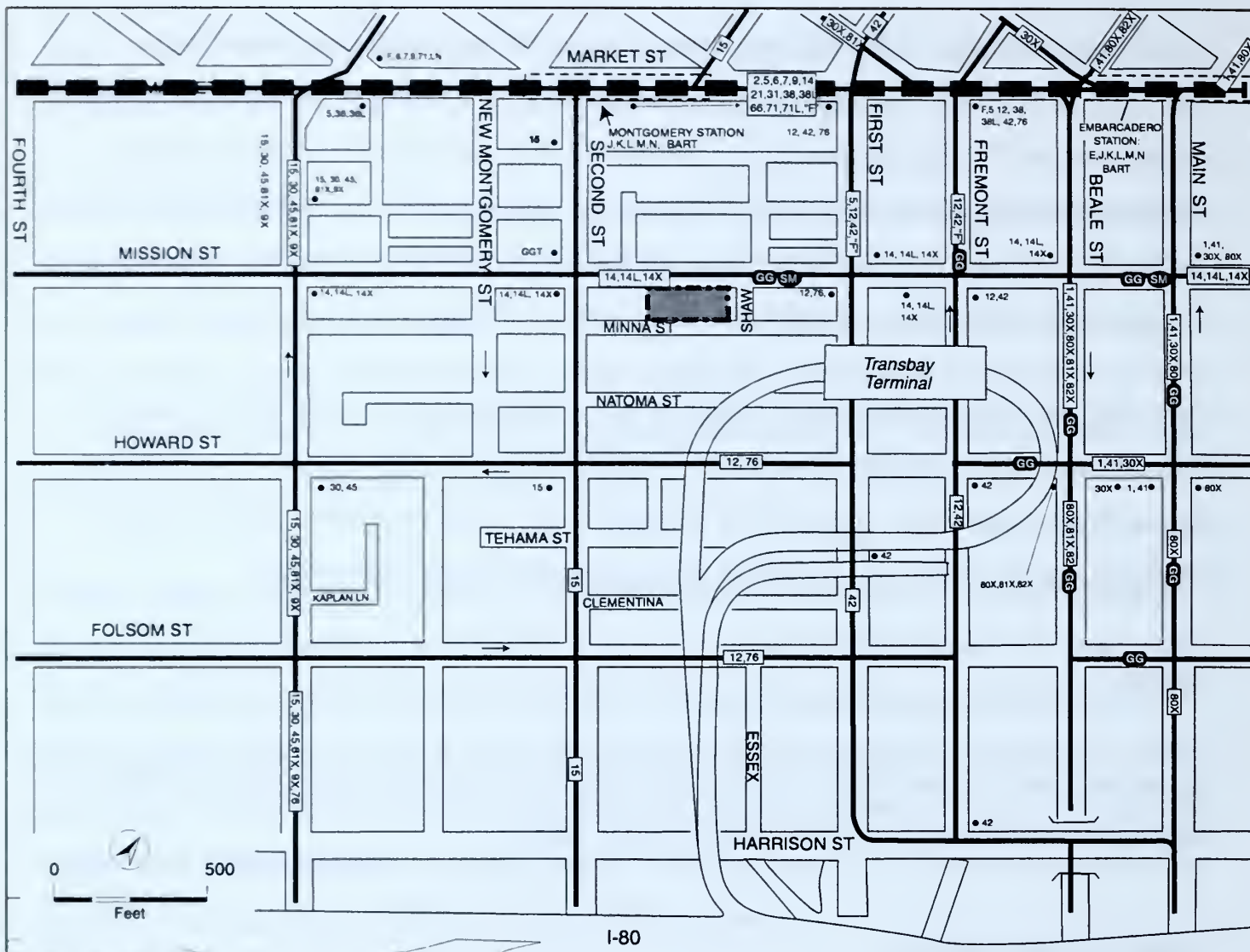
TRANSIT

The project area is accessible by a high level of regional and local transit services. Figure 18 shows the transit routes that operate in the project vicinity.

Regional Transit Service

Regional transit service via a variety of modes is available within walking distance of the project site. BART serves the East Bay and northern San Mateo County. Ferry service is available by Golden Gate Transit from the North Bay and from Vallejo, Richmond, and Alameda and Oakland ferries in the East Bay. AC Transit provides service from the East Bay, SamTrans from the Peninsula, and Golden Gate Transit from the North Bay. Caltrain provides service from the Peninsula and the South Bay.

Bay Area Rapid Transit (BART) provides regional rail transit service, connecting the East Bay with San Francisco via the Richmond, Pittsburg and Bay Point, Dublin and Pleasanton, and Fremont lines. It also connects San Francisco to the Peninsula via the Daly City and Colma line BART operates underground along Market Street. The Montgomery station is located one



SOURCE: The Duffey Company

Legend

-  PROJECT SITE
-  MUNI BUS STOPS
-  SAN FRANCISCO MUNI ROUTE
-  GOLDEN GATE TRANSIT ROUTE
-  SAMTRANS BUS ROUTE
-  BART ALIGNMENT AND STATION



555 MISSION STREET

FIGURE 18: EXISTING TRANSIT NETWORK AND STOP LOCATIONS

block north of the project site. During the PM peak hour, BART operates on 3- to 10- minute headways carrying approximately 15,760 passengers to the East Bay and approximately 7,680 passengers to the Peninsula.³

The Peninsula Commute Service (Caltrain) provides train service between Gilroy and San Francisco and is operated by the Peninsula Joint Powers Board. The San Francisco Caltrain terminal is located at Fourth and Townsend Streets, approximately one mile south of the project site. Caltrain operates 66 express and local trains on weekdays with PM peak hour headways of five to 30 minutes. Weekday peak hour ridership is approximately 2,190 passengers.⁴

The San Mateo County Transit District (SamTrans) provides bus service between San Mateo County and San Francisco. SamTrans operates 12 bus lines into San Francisco, eight terminate downtown at the Transbay Transit Terminal located one block east of the proposed project. SamTrans buses operate at headways of 20 to 30 minutes during the PM peak hour. Ridership on the downtown lines during the PM peak hour is approximately 1,280 passengers.⁵

Golden Gate Transit provides bus service between Marin and Sonoma Counties and San Francisco and ferry service from terminals in Larkspur and Sausalito in Marin County to San Francisco. Golden Gate Transit is operated by the Golden Gate Bridge, Highway, and Transportation District (GGBHTD). There are eight basic and 18 commute bus routes that serve the Civic Center and Financial Districts in San Francisco via the Van Ness and Battery and Sansome corridors. During the PM peak hour, the basic routes operate at 30 to 60 minute headways and the commute routes operate at 3 to 30 minute headways. There are also three shuttle buses operated by Golden Gate Transit that provide free service between the Ferry Building and the Financial District and Civic Center. Ferry service is available on weekdays during the AM and PM peak periods and on Fridays and weekends during the midday and early evening. Approximately 3,210 passengers use Golden Gate Transit bus service and 890 passengers ride the Golden Gate ferry during the weekday PM peak hour.⁶

The Alameda-Contra Costa County Transit District (AC Transit) provides transbay bus service between the East Bay and San Francisco. AC Transit transbay routes terminate at the Transbay Transit Terminal located one block east of the project site. Most of the transbay bus service operates during peak commute hours in the peak direction (to San Francisco in the morning and from San Francisco in the afternoon). Headways range from 15 to 30 minutes. Approximately 3,250 passengers ride the transbay buses during the weekday PM peak hour.⁷

East Bay ferry service is available from Vallejo, Richmond, Alameda and Oakland, and Harbor Bay to San Francisco. During the PM peak hour, these ferries operate at 30-minute to one-hour headways and collectively carry approximately 1,300 passengers.⁸

Local Transit Service

Local transit service is provided by the San Francisco Municipal Railway (Muni), which operates buses, cable cars, streetcars, and Muni Metro light rail in San Francisco. Twenty-seven bus lines, the historic F-Line Streetcar, and Muni Metro lines J through N serve the area within two blocks of the project site. Seven bus lines and the F-Line Streetcar stop at the Transbay Terminal located one block east of the project site. Muni Metro operates in the Market Street subway and serves the Montgomery station located one block north of the project site. The bus lines operate at headways between 4 and 20 minutes on weekdays during the PM peak hour. The F-Line Streetcar operates on 9-minute headways and the Metro lines operate on 6- to 12- minute headways during the weekday PM peak hour.⁹ Ridership data obtained through an analysis of the four major transit corridors in San Francisco show that Muni lines serving downtown carry approximately 21,500 passengers during the weekday PM peak hour.¹⁰

Parking

Parking supply and occupancy data was based on previously published parking studies, updated with data collected in December 1999 and January/February 2000.¹¹ Counts were conducted at

public off-street parking facilities and for on-street curbside parking within two blocks of the project site. The boundaries of the parking study area are Market Street to the north, Fremont Street to the east, Folsom Street to the south, and Third Street to the west.

Public parking is available in 10 parking garages and 10 surface lots in the study area. These facilities supply approximately 4,575 off-street parking spaces. Many of these facilities operate valet service during the week and operate as self-park facilities on the weekend.

There are about 840 on-street parking spaces in the study area. Immediately adjacent to the project site, on-street parking is allowed on Mission, Second, and Minna Streets. No parking is allowed along Shaw Alley. On Mission Street there are metered spaces, some of which are yellow zones. Parking on Mission Street is prohibited 7:00 to 9:00 AM and 3:00 to 6:00 PM on weekdays. There are metered spaces on Second Street. Minna Street has a combination of 30-minute metered spaces, metered yellow zones, and unmetered spaces on the north side of the street.

The midday (1:00 to 3:00 PM) off-street parking occupancy for the study area ranges from 65% to 100% with an overall average occupancy of 85%. On-street parking occupancy ranges from 61% to 100% with an overall average occupancy of 83%. Occupancy was lowest in the project block, at about 65% for both on- and off-street parking. Parking facilities are considered to operate at capacity when they are 90% occupied for off-street facilities and 95% occupied for on-street facilities.

Bicycles and Pedestrians

Several streets in the project vicinity are part of the San Francisco Department of Parking and Traffic numbered and signed bicycle route network. Market Street (#50), Howard Street (#30), and Second Street (#11) are signed bicycle routes and designated as Class III bicycle facilities. Folsom Street (#30) west of Main Street has a designated bike lane (Class II facility) and a signed bicycle route east of Main Street (Class III bicycle facility). All of these streets are identified as Citywide Bicycle Routes in the *San Francisco General Plan*.

The *San Francisco General Plan* identifies Market and Mission Streets as Citywide Pedestrian Network Streets. Second Street is designated as a Neighborhood Commercial Pedestrian Street. There is a moderate flow of pedestrian traffic in the vicinity of the proposed project during the midday, especially near the intersection of Second and Mission Streets. There is light pedestrian flow on Minna Street, which is mainly used to access service entrances and loading docks.

Pedestrian level of service is a measure of crosswalk or sidewalk conditions based on the amount of space available to each pedestrian and the average walking speed. The *1994 Highway Capacity Manual* definitions for each pedestrian level of service are provided in Appendix D. Pedestrian counts at the Second and Minna Streets intersection were taken in February 1999. Crosswalk analysis for the peak PM 15 minutes at this intersection shows that all four crosswalks operate at LOS A.

IMPACTS

SIGNIFICANCE CRITERIA

The City and County of San Francisco generally considers the traffic impacts from a project to be significant if the vehicle trips associated with the project would: cause signalized intersection operations to deteriorate from LOS D or better to LOS E or F or from LOS E to LOS F; interfere with existing transportation systems causing substantial alteration to circulation patterns or causing major traffic hazards; contribute substantially (“considerably”) to cumulative traffic increases at intersections that would result in deterioration of traffic conditions to unacceptable levels; or contribute substantially to cumulative traffic increases at intersections already operating at unacceptable levels. For unsignalized intersections, significant impacts may be identified because of degradation of LOS at two or more key approaches or fulfillment of signal warrants, depending on the circumstances.

Impacts on transit service are assessed by determining the Transit Operations Level of Service (TOLOS), which measures the occupancy of transit vehicles relative to their capacity. TOLOS

A through D are acceptable service levels, and TOLOS F is considered an unacceptable service level. Each transit operator determines its service level, typically using a ratio of passengers to seats on transit vehicles. All regional carriers, except BART, use a service standard ratio of one passenger per seat (100%); operations at or above 100% are at TOLOS E. BART uses a service level of 135% during the peak hour (115% during a three-hour peak period) to account for standees on its trains. TOLOS E for BART is at or above 135% of capacity during the PM peak hour.¹² Local transit service levels are set by Muni, which also accepts a percentage of standees on its vehicles. The Muni service level standards are based on a passenger-per-seat ratio ranging from 100 to 108%, depending on the type of vehicle. For Muni, TOLOS E occurs at 96% of capacity utilization.¹³

Policies in the *San Francisco General Plan* emphasize the importance of public transit use and discourage the provision of facilities that encourage automobile use. In this context, and in the context of San Francisco's highest level of transit accessibility, creation of parking demand which cannot be met by existing or proposed parking facilities would not be considered a significant environmental effect. Data on unmet parking demand is presented for informational purposes and may inform decisions regarding project approval. In some circumstances, secondary impacts may result from unmet parking demand, such as substantial changes in neighborhood character or creation of hazardous conditions caused by illegally parked cars.

For this analysis, a project generally would be considered to have a significant effect on the environment if it were to result in substantial pedestrian overcrowding on public sidewalks or crosswalks creating an unacceptable pedestrian LOS E or F; create hazardous conditions for pedestrians or bicyclists; or otherwise substantially interfere with pedestrian or bicycle accessibility.

Project Effects

Transportation impacts associated with the proposed project were determined based on an estimate of person trips that would be generated by the project on a daily basis and during the PM peak hour. The person-trips were calculated based on the proposed land uses for the

project, categorized by modes of travel according to the location of trip origins and destinations and survey data from downtown San Francisco. Based on these assumptions and calculations, the proposed project would generate an estimated 11,285 daily person-trips, with an estimated 1,185 person trips occurring during the PM peak hour, when traffic is at its heaviest. Person-trips generated by the existing uses on the proposed project site during the PM peak-hour were counted and subtracted from the project generated trips to yield about 1,035 net new PM peak-hour person-trips.

Person-trips were categorized by mode of travel as shown in Table 1. A majority of persons travelling to or from the proposed project during the PM peak-hour would travel by auto (about 345 person trips or 33%) or transit (about 635 person trips or 61%). Accounting for carpools, the person-trips made by auto translate into about 265 vehicle trips. Out of a total of 265 PM peak-hour vehicle trips, about 255 would be vehicles leaving the project site or vicinity and about 10 would be travelling to the site.

TABLE 1
PM PEAK HOUR PERSON TRIPS BY MODE AND VEHICLE TRIPS

	Person Trips					Vehicle Trips		
	Auto	Transit	Walk	Other	TOTAL	Inbound	Outbound	TOTAL
Number of Trips	344	633	31	29	1,037	9	256	265
% of Total Trips	33.2%	61.0%	3.0%	2.8%	100%	3.4%	96.6%	100%

Source: The Duffey Company, June 2000

Trips generated by the 555 Mission Street project were added to existing conditions to assess the project-related impacts on traffic, transit, parking, pedestrians, and bicycles. The analysis of the existing plus project does not include trips generated by other projects in the vicinity that are planned or under construction.

Traffic

Under Existing Plus Project conditions, all of the signalized intersections would operate at the same level of service as in the Existing conditions (see Table 2). Average delay per vehicle would increase at seven of the nine signalized intersections (delays would increase from about one to nine seconds) and would not change at New Montgomery and Mission Streets and First and Mission Streets. The intersections of Third and Market Streets, First and Harrison Streets, and Essex and Harrison Streets would continue to operate at LOS F. The intersections of Third and Mission Streets, First and Mission Streets, and First and Howard Streets would continue to operate at LOS E. The intersection of Second and Mission Street would degrade from LOS C to LOS D and the intersections of New Montgomery/Mission and Second/Howard would remain at LOS C. The project would not substantially increase delays at intersections already operating at LOS F, and therefore would not cause significant impacts at the nine signalized intersections.

At the unsignalized intersection of Second and Minna Streets, the addition of project traffic would result in the deterioration of the Minna Street approach from LOS B to LOS C. Because Minna Street is one-way westbound, all vehicles leaving the project garage would have to pass through the Second Street and Minna Street intersection. Average vehicle delays at the westbound approach would increase from about seven seconds to about 12 seconds. The Minna Street approach to the Second and Minna Street intersection would continue to operate at an acceptable level of service and therefore the project would not result in a significant impact at this unsignalized intersection.

Transit

The project-generated impacts on regional and local transit systems were assessed by adding project transit trips to existing ridership and measuring the Transit Operations Level of Service (TOLOS) at regional and downtown screenlines. The concept of screenlines is used to

TABLE 2
INTERSECTION LEVEL OF SERVICE
WEEKDAY PM PEAK HOUR

Intersection	Existing		Existing Plus Project		Cumulative 2015		
	Delay (sec/veh) ¹	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Project % Cum. ²
<i>Signalized</i>							
Third and Market	> 60.0	F	> 60.0	F	> 60.0	F	2.9%
Third and Mission	41.5	E	44.8	E	> 60.0	F	2.1%
New Montgomery and Mission	18.1	C	18.1	C	29.4	D	2.5%
Second and Mission	18.7	C	27.4	D	51.4	E	13.5%
Second and Howard	15.9	C	23.4	C	52.6	E	28.8%
First and Mission	58.6	E	58.6	E	> 60.0	F	14.3%
First and Howard	50.6	E	50.8	E	> 60.0	F	13.2%
First and Harrison	> 60.0	F	> 60.0	F	> 60.0	F	3.6%
Essex and Harrison	> 60.0	F	> 60.0	F	> 60.0	F	3.2%
<i>Unsignalized</i>							
Second and Minna ³	0.7	A	3.0	A	6.6	B	
Minna Approach	6.6	B	12.2	C	20.1	D	

Notes:

1. Delay is expressed as an average delay in seconds per vehicle for all approaches at signalized intersections. The unsignalized intersection reports an average delay for the overall intersection and for the worst approach.
2. Represents proposed project's contribution to intersection growth between existing year and 2015.
3. A localized intersection analysis was conducted for the Second and Minna Streets intersection. Delays and levels of service were estimated for the entire intersection and for the worst or westbound Minna Street approach. This intersection was not included in the Cumulative 2015 analysis. The results reported in the Cumulative 2015 column are for the localized analysis that includes three new projects in the vicinity that would add vehicles to Minna Street: 101 Second Street, 535 Mission Street, and the Century.

Source: The Duffey Company, June 2000.

describe the magnitude of travel from or to the downtown area and its vicinity, and to compare estimated transit volumes to available capacities in each transit corridor. Screenlines are hypothetical lines that would be crossed by persons traveling between downtown and its

vicinity and other parts of San Francisco and the region. The regional screenlines are established at the City boundaries for each of the regional transit carriers.

Four screenlines have been established within San Francisco, surrounding the downtown and vicinity, to analyze operational impacts of the proposed project on Muni service: Northeast, Northwest, Southwest, and Southeast (see Figure D-2 in Appendix D, Transportation, for a map showing these screenlines). There are sub-corridors within each screenline, such as the Third Street corridor, which serves the northeast and southeast quarters of the City; the subcorridors are analyzed separately from the other lines serving a particular quarter of the City. The Muni screenlines schematically reflect the Maximum Load Point for each Muni line which crosses one of the screenlines. For the analysis in this EIR, Muni ridership measured at the four San Francisco screenlines and sub-corridors represents the peak direction of travel and patronage loads for the Muni system, which corresponds with the PM commute outbound direction from the vicinity of the project to other parts of the City.

Of the 635 PM peak hour transit trips that would be generated by the project, about 360 trips (57%) would end at destinations within San Francisco and about 275 trips (43%) would end at locations outside San Francisco. None of the transit carriers would reach or exceed the capacity utilization threshold of TOLOS E (135 percent for BART, 96 percent for Muni, and 100% for all other operators) with the added project trips. Of the regional transit trips generated by the project, 57% would be trips to the East Bay. BART and AC Transit in the East Bay would experience 1% increases in capacity utilization from 123% to 124% and 83% to 84%, respectively. Capacity utilization on East Bay ferries would remain at 62%. Transit carriers in the North Bay and South Bay would experience increases of less than 1% of capacity utilization, and therefore would remain at about 62% capacity utilization in the North Bay and 84% in the South Bay overall.

Under Existing Plus Project conditions, the capacity utilization at each of the Muni screenlines would not increase by more than 3% above Existing conditions and all screenlines would operate below capacity, ranging from 46% on the Third Street corridor to 90% on the Mission

Street corridor. Thus, all corridors would operate at service levels above TOLOS E, and there would be no significant impacts on Muni service as a result of project-generated transit trips.

Parking

The proposed project would generate a demand for about 610 parking spaces. The proposed provision of 150 on-site valet-assisted parking spaces would result in a shortfall of 460 spaces.¹⁴ The Planning Code does not require parking for non-residential uses in the C-3 district. Public parking facilities located within the study area could accommodate unmet parking demand from the project.

Approximately 15% or about 685 of the 4,580 off-street parking spaces would be available during the midday. On-street spaces would also be available during the midday for short-term parking. Approximately 17% or about 140 of the 840 on-street spaces would be available. Since the off-site parking facilities currently operate at 85% and 83% capacity, at times motorists may have to circle the area to find available parking. The project would contribute to increased competition for off-street and on-street parking in the vicinity.

The proposed project would supply about 38,990 square feet of parking on site, which falls within the maximum of 7% of gross floor area or 39,557 square feet for accessory parking.

Pedestrians and Bicycles

A crosswalk analysis of the Second and Mission intersection reviewed the added project pedestrian trips that would pass through this intersection. Pedestrian trips would include a combination of all or some of the 31 walk trips, 633 transit trips, and 265 vehicle trips generated by the project in the PM peak hour, depending on the trip destinations and parking locations. Pedestrian trips would occur primarily on Mission and Second Streets to access bus stops, the Montgomery BART and Muni Metro station, the Transbay Transit Terminal, the Ferry Terminal and parking locations. During the peak 15 minutes of the PM peak hour, all

crosswalks at Second and Mission would operate at LOS A under the Existing Plus Project conditions.

All or some of the 29 trips by other modes would be bicycle trips. While these trips would not have an impact on vehicular traffic, the increase in vehicular traffic could affect bicyclists, especially on designated bicycle routes such as Second Street (Class III). The project would generate additional vehicle trips turning from Minna Street on to Second Street. While these vehicles could conflict with bicyclists using the Second Street bicycle route, bicyclists on Second Street would continue to have the right-of-way and the potential for conflicts would not exceed that generally accepted at other downtown locations, including other driveways and intersections on Second Street. For these reasons, the potential impacts on bicycle traffic would not be considered significant. The project would provide bicycle facilities on-site, including a storage area for at least seven bicycles in the project garage. This would meet requirements in the Planning Code, Section 155(j).

Loading

The estimated demand for freight and service vehicle delivery and loading at the proposed project would be about 120 daily truck trips for the office and retail uses. The average-hour loading demand would be six spaces and the peak-hour demand would be seven spaces.¹⁵ The Planning Code would require six loading spaces on-site.¹⁶ The code allows substitution of half of the required spaces for two van-sized loading spaces each.¹⁷ The project proposes to provide three freight loading spaces on Minna Street and six van-sized loading spaces in the garage, which would meet both the code requirement and the average and peak-hour loading demand.

There may be potential conflicts between trucks backing out of the loading spaces on Minna Street and vehicles travelling on Minna Street or trucks serving The Century project, which is under construction between Minna and Natoma Streets. The Century project will have loading docks across from the 555 Mission Street project on the south side of Minna Street and to the

west. Trucks or service vehicles arriving at these two sites simultaneously may experience some delays (one to two minutes) associated with trucks maneuvering in and out of the loading docks. Truck maneuvers would also temporarily block traffic exiting the 535 Mission Street garage. The 555 Mission Street project would generate an average of six truck trips per hour during the PM peak hour of traffic. Each truck maneuver into and out of the loading docks would require about one to two minutes to complete. At most, three trucks would use the docks at one time since there would be three loading docks. In addition, over 60 percent of delivery vehicles that would serve the site each day would be pick-up trucks or vans, which would use the van-sized loading spaces in the parking garage. Given the limited number of truck trips and the short period of potential traffic disruption on Minna Street, the temporary blockage would not be considered a significant impact.

Construction

The construction period for the proposed project is expected to begin in early 2001 and last approximately 24 months. Demolition and site clearance would occur in first three months, foundation work would occur in the five months following, and the construction of the building would last 16 months. The project would be occupied in early 2003.

The heaviest truck activity would occur in the first two phases of construction, when an average of 15 and maximum of 30 trucks would visit the project site daily. During the last phase, an average of 10 and maximum of 20 trucks would go the project site daily. Trucks are expected to travel to the site via Second and Mission Streets and leave the site via First Street to access US 101 North or South and or I-80 (Bay Bridge). Construction materials would be delivered and staged off of Mission Street, Minna Street, and on the project plaza. The Mission Street sidewalk would be closed and a fully covered and protected sidewalk would be provided in the parking lane. This parking lane would be closed for the duration of the construction period and result in a temporary loss of approximately eleven spaces. Closure of the sidewalk and use of the parking lane would require permission from the Department of

Parking and Traffic and the Department of Public Works. Temporary closure or relocation of transit stops would not be required.

During the first phase of construction, there would be an average of 20 and maximum of 30 construction workers on site daily. There would be an average of 70 and maximum of 100 workers on site daily during the second phase of construction. The final and third phase of construction would require an average of 150 and maximum of 300 construction workers on site daily. Construction workers would be encouraged to use transit through payment incentives. An arrangement for parking would be sought at a nearby parking lot. Though construction impacts may inconvenience employees, residents, and visitors to the area, construction activities are a fact of life in urban settings and impacts would be temporary in nature. For these reasons, construction period impacts would not be considered significant.

CUMULATIVE ANALYSIS (2015)

The Cumulative conditions assume an overall growth rate that would include trips generated by the proposed project.¹⁸ Information regarding the transportation improvements planned to be in place by 2015 were obtained from the *Interim Year Transportation Analysis Report* and the *Mission Bay Subsequent EIR* and updated to reflect current project status.¹⁹

Traffic

Under future 2015 cumulative conditions, average vehicle delays would increase at all intersections. The intersections of Third and Market, First and Harrison, and Essex and Harrison would continue to operate at LOS F as under the Existing Plus Project conditions. The intersections of Third and Mission Streets, First and Mission, and First and Howard Streets would deteriorate from LOS E to LOS F. The intersection of Second and Mission Streets would deteriorate from LOS D to LOS E; the intersection of Second and Howard Streets would deteriorate from LOS C to LOS E, and the intersection of New Montgomery and Mission Streets would deteriorate from LOS C to LOS D. The final column in Table 2, p.84,

shows the percentage of trips contributed by the project to cumulative conditions at intersections with LOS E or F. The proposed project would make a noticeable contribution to the cumulative growth at the following intersections: Second/Mission (13.5%), Second/Howard (28.8%), First/Mission (14.3%), and First/Howard (13.2%). Thus, the project would be considered to contribute to a cumulatively significant environmental impact related to localized congestion at area intersections.

The Cumulative 2015 analysis assumes deterioration of some intersection operations over a 15-year period. Due the varied timing of development projects, the intersection operations may degrade to unacceptable levels of service prior to 2015.

Project sponsors of new office space, in excess of 100,000 square feet in the C-3 District are required to provide on-site transportation brokerage services for the lifetime of the building pursuant to requirements of the Planning Code, Section 163. This program is focused on the reduction of single occupant vehicle trips into downtown San Francisco and would be expected to have a positive impact in reducing automobile travel to the project site.

Some measures that assist in reducing the number of p.m. peak period vehicle trips and enhance transit facilities are included in City ordinances and are applicable to the proposed project. Section 163 of the Planning Code requires that project sponsors of new office buildings in the C-3 Districts prepare a transportation management program (TMP) to be implemented by the Transportation Broker. The TMP must provide transit information to tenants and their employees, provide for on-site sale of transit passes and debit cards (such as BART tickets), coordinate ridesharing activities for tenants and their employees, promote coordinated flex-time or staggered work hours to more evenly distribute the arrival and departure times of tenant employees, and carry out other activities determined by the Planning Department to be appropriate to meet the intent of minimizing the transportation impacts of added office employees in the downtown area. Other provisions of the Planning Code require that parking rates be designed to discourage use by commuters, that preferential parking be provided for vanpools and carpools, and that secure bicycle parking with lockers and showers be provided.

A localized analysis of the Second and Minna intersection was conducted to determine the combined impacts associated with the development of the 555 Mission Street project and three other projects that would use Minna Street for vehicular access. These projects are:

- *535 Mission Street (under review)* – 253,000 square feet of office; 4,400 square feet of retail space; and 40 parking spaces; estimated opening date: 2002 and 2003
- *101 Second Street (recently completed; partially occupied)* – 368,000 square feet of office and 75 parking spaces
- *The Century (70-72 Natoma) (under construction)* – 505 dwelling units 10,000 square feet of retail space; 11,080 square feet of health club space; and 406 parking spaces; estimated opening date: 2001

With these projects and 555 Mission Street, the critical approach to the intersection, westbound Minna Street, would operate at LOS D with an average vehicle delay of approximately 20 seconds. Vehicles trying to turn left or right onto Second Street would experience delays. Queues would form on Minna Street and potentially back into the parking garages. As the worst approach to the intersection is a secondary street that would primarily serve the projects, and because traffic on Second Street would not experience a substantial increase in travel delays, the combined effect of projects on Minna Street would not result in significant traffic impacts.

- Designate the area on Second Street, in front of the westbound approach from Minna Street, as a "Keep Clear" zone to allow unimpeded left-turns from Minna Street. This would ensure that Minna Street traffic could enter Second Street if vehicles are queued on Second Street.
- Install an exclusive left-turn at the westbound approach on Minna Street by removing on-street parking spaces on Minna Street. The westbound approach would continue to operate at LOS D with this improvement, but the queue length would be slightly shortened.
- Signalization of the Second and Minna Streets intersection would reduce the delays on the westbound Minna Street approach. Signalization of this intersection would require coordination with signal timing at adjacent intersections to ensure that traffic flow along Second Street is not disrupted.

Transit

By 2015, the demand for regional transit service to the East Bay and South Bay during the PM peak hour is expected to increase. The BART transbay ridership is expected to increase from the existing 123 % to 126 % of capacity, while AC transit transbay ridership is expected to rise from 83 % to 135 % of capacity. This increase would exceed the TOLOS E service standards for AC Transit. The result would be increased crowding for East Bay transit riders, except on the ferries, which are expected to operate at about 79 % capacity in 2015. The project would contribute less than 2 % to the future ridership on AC Transit and thus would not be considered to contribute considerably to significant cumulative impacts on that carrier. Transit services to the North Bay and South Bay would be adequate to meet projected demand. Golden Gate Transit buses and ferries are expected to operate at 85 % and 56 % capacity, respectively. Service to the South Bay is estimated to operate at 83 % capacity on BART, 97 % on CalTrain, and 92 % on SamTrans. Thus, no significant crowding impacts would occur on these regional carriers under future cumulative conditions.

The transit ridership and capacity assessment for the future cumulative condition is based on Muni projections for the Transbay Redevelopment Area Plan for the year 2015. The overall capacity utilization of Muni service in the downtown area would be about 105 % during the weekday PM peak hour. Muni lines serving Northwest San Francisco, Southeast San Francisco (except along the Third Street Corridor), and Southwest San Francisco would operate above the 96 % TOLOS E service standard. Capacity utilization on these lines would range from 98 % to 129 % by the year 2015, resulting in a significant cumulative impact. The proposed project would contribute approximately 3 % of the increase in transit ridership. The Muni TOLOS service standards would be exceeded even without the project, and therefore the project contribution would not be considerable under the cumulative conditions.

A Transit Impact Development Fee (TIDF) of \$5.00 per square foot of office space is imposed on all new development in the downtown area pursuant to the provisions of San Francisco Administrative Code, Chapter 38. The project sponsor's contribution to the TIDF would provide monetary support to Muni for the improvement of transit service to the downtown.

Parking

The seismic upgrade of I-80 and the Bay Bridge is planned to take place between 2000 and 2006. Approximately 3,050 parking spaces will be lost in the vicinity of the Bay Bridge ramps and the Transbay Terminal, for staging and construction activities. About 2,050 of the parking spaces would be reclaimed upon project completion resulting in a permanent loss about 1,000 parking spaces in the vicinity of the project. Within the project vicinity, development is expected to result in a net loss of about 750 public parking spaces by the year 2015.²⁰

With this anticipated parking shortfall, it would be relatively difficult to park in the nearby vicinity, and drivers would be forced to modify their behavior to look for parking farther from their destination, to drive to the site at times of the day and week when more parking is available, or switch modes of transportation. While potentially inconvenient, these modifications would be consistent with the City's Transit First Policy, and the projected parking shortfall would not be considered to be a significant impact.

NOTES - Transportation

1. The information in this section is from the *555 Mission Street Transportation Impact Report*, June 20, 2000, prepared by The Duffey Company. This report is on file and available for public review at the Planning Department, 30 Van Ness Avenue, Fourth Floor.
2. *554 Mission Street Office and Retail Building Transportation Report*, Environmental Science Associates, June 18, 1999; *First and Howard Street Transportation Study*, Final Report, Korve Engineering, September 10, 1999; and *235 Second Street Transportation Study*, Final Report, Wilbur Smith Associates, October 5, 1999.
3. *Interim Year Transportation Analysis Report for China Basin and South Beach and Transbay*, Wilbur Smith Associates, Korve Engineering, Inc., CHS Consulting Group, and Pittman & Hames Associates, June 1999.
4. Ibid.
5. Ibid.
6. Ibid.
7. Ibid.

8. The peak hour for ferry service was defined as the peak hour of operation for each of the service providers. The Vallejo, Richmond, and Alameda and Oakland ferries were assumed to provide two runs each day during the PM peak hour and the Harbor Bay ferry was assumed to provide one run during the PM peak hour.
9. The Official San Francisco Street & Transit Map, San Francisco Municipal Railway, 1998-1999.
10. Muni 1997-1998 Monitoring Data, San Francisco Municipal Railway Scheduling Department, November 1998.
11. Parking data was obtained from the following published parking studies: *First and Howard Transportation Study*, Pittman & Hames Associates, September 10, 1999; *San Francisco Giants Ballpark at China Basin Final Environmental Impact Report*, June, 1997; *Transportation Technical Report for the Rincon Sports and Entertainment Center*, Korve Engineering, February 12, 1996; and *Yerba Buena Redevelopment Project Area Expansion /Emporium Site Development Project Transportation Study*, Korve Engineering, August, 17, 1999. At the time the inventory was taken, 101 Second Street was not yet occupied, and therefore its off-street parking supply of 75 spaces was not included in the count.
12. *Interim Transportation Impact Analysis Guidelines*, San Francisco Planning Department, January 2000, Appendix F.
13. *Interim Transportation Impact Analysis Guidelines*, Interim Edition, San Francisco Planning Department, January 2000.
14. The project would provide 150 valet parking spaces. On the basis of Planning Department Guidelines, the parking area prepared could accommodate 181 valet spaces. Of 181 spaces were actually provided, the parking shortfall relative to demand would be reduced to 429 spaces.
15. Loading demand calculations based upon methodology in the *Interim Transportation Impact Analysis Guidelines for Environmental Review*, Interim Edition, The Planning Department of the City and County of San Francisco, January 2000.
16. San Francisco Planning Code, Section 152.1
17. San Francisco Planning Code, Section 153.6
18. The traffic volumes for the Cumulative (2015) analysis were obtained by applying a 1% growth rate per year (15%) to existing (1999) volumes. Cumulative conditions for transit were obtained from the *Mission Bay Final Subsequent EIR*, City and County of San Francisco Planning Department and San Francisco Redevelopment Agency, September 17, 1998.
19. *Interim Year Transportation Analysis Report for China Basin and South Beach and Transbay*, Wilbur Smith Associates, Korve Engineering, Inc., CHS Consulting Group, and Pittman & Hames Associates, June 1999 and *Mission Bay Final Subsequent EIR*, City and County of San Francisco Planning Department and San Francisco Redevelopment Agency, September 17, 1998 and telephone conversation with Jack Fleck, Traffic Engineering Division, Department of Parking and Traffic, regarding transportation improvements, March 2000.
20. *Transbay Redevelopment Area Plan EIR Transportation Study*, Pittman & Hames, April 1998. Updated by The Duffey Company, December 1999 and January/February 2000 Parking Inventory for the 555 Mission Street Project.

E. AIR QUALITY

SETTING

APPLICABLE PLANS AND REGULATIONS

Ambient Air Quality Standards

Federal, state, and local laws and regulations form the foundation for controlling air pollution. The federal Clean Air Act, including amendments of 1990, and the California Clean Air Act of 1988 specify that federal and state regulatory agencies set upper limits on the airborne concentrations of six criteria air pollutants. National Ambient Air Quality Standards exist for ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter, and lead.¹ Reactive organic gases (ROG) and oxides of nitrogen (NO_x) are also regulated as precursor contaminants that react in the atmosphere to form ozone, and particulate matter is regulated as inhalable particulate matter less than ten microns in diameter (PM₁₀).

The federal and state standards for these pollutants are summarized in Appendix D. The standards are upper limits designed to protect all segments of the population including those most susceptible to the pollutants' adverse effects (e.g., the very young, the elderly, people weak from illness or disease, or persons doing heavy work or exercise).

Air Quality Management Plans

The federal Clean Air Act, as amended, and the California Clean Air Act provide the legal framework for attaining and maintaining the ambient air standards. Both the federal and state acts require that the California Air Resources Board (CARB) designate as "nonattainment areas" portions of the state where federal or state ambient air quality standards are not met. Where a pollutant exceeds standards, the acts require implementation of air quality

management plans that demonstrate how standards will be achieved. These laws also provide the basis for the implementing agencies to develop mobile and stationary source performance standards.

The Bay Area Air Quality Management District (BAAQMD) is the primary agency responsible for planning, implementing, and enforcing federal and state ambient standards in the Bay Area. Most recently, in 1999, the BAAQMD revised the region's State Implementation Plan (SIP) for ozone. The SIP is maintained for the region because of ongoing exceedances of the federal ozone standard. The SIP is a compilation of plans and regulations prepared jointly by the BAAQMD, the Metropolitan Transportation Commission, and the Association of Bay Area Governments that governs how the region and state will comply with the federal Clean Air Act requirements to attain and maintain the ozone standard. The state ozone and PM₁₀ standards are also exceeded in the region. Because of the ozone violations, the BAAQMD is required to prepare a Clean Air Plan to attain the state standard. Maintenance of the ozone standard is required to be addressed every three years in revisions of the plan. The *1997 Clean Air Plan* and the 1999 SIP revision include the most recent measures to reduce ground level ozone by reducing emissions of ozone precursors.^{2, 3} A triennial update of the *Clean Air Plan* is scheduled to occur in 2000. No state plan is required to meet state PM₁₀ standards. Local environmental plans and policies also recognize community goals for air quality. The *San Francisco General Plan* includes the 1997 Air Quality Element.⁴ The objectives specified by the City include the following:

- Objective 2: Reduce mobile sources of air pollution through implementation of the Transportation Element of the General Plan.
- Objective 3: Decrease the air quality impacts of development by coordination of land use and transportation decisions.
- Objective 5: Minimize particulate matter emissions from road and construction sites.
- Objective 6: Link the positive effects of energy conservation and waste management to emission reductions.

AIR QUALITY CONDITIONS

Climate

The San Francisco Bay Area's regional meteorological conditions are cool and dry in the summers and mild and moderately wet in the winters. A daytime sea breeze provides fresh air to the Bay Area, but also tends to cause temperature inversions by positioning cool surface air underneath warmer upper-air. The inversions limit vertical motion of pollution and cause pollution potential to be the highest in the sheltered valleys throughout the region and in the subregions that are not directly affected by the marine air entering through the Golden Gate.

The project site is near the bay shore of San Francisco's South of Market neighborhood and is provided with clean marine air that travels from the west over the low hills in San Francisco and carries pollutants eastward towards the interior of the bay.⁵ Temperatures in San Francisco are moderated by the marine air and the proximity to the bay. Average summertime highs are in the 60s to mid-70s, and in the winter, average lows are in the 40s.^{6, 7}

Regional and Local Air Quality

The nine-county San Francisco Bay Area Air Basin has a history of recorded violations of federal and state ambient air quality standards for ozone, carbon monoxide, and PM₁₀. Since the early 1970s, substantial progress has been made toward controlling these pollutants. The progress has led the area to attaining all state and federal standards except those for ozone and PM₁₀. The Bay Area is an ozone nonattainment area for state and federal purposes. For PM₁₀, the Bay Area does not meet the state standard, but the area does meet the federal standard.

The BAAQMD operates air quality monitoring stations in San Francisco at 10 Arkansas Street (at the foot of Potrero Hill) and at 939 Ellis Street (near the Civic Center). Either location would probably be representative of conditions in the project vicinity; however, the Ellis Street

station monitors only carbon monoxide. Peak carbon monoxide concentrations observed at the Ellis Street station tend to be slightly higher than those observed at Arkansas Street.

Because the project site is located downtown, carbon monoxide concentrations would also tend to be higher than those observed at the Arkansas Street station. Ozone and particulate matter data at the Arkansas Street station show the following:⁸

- During the period of 1993 through 1998, the state 1-hour ozone standard and the federal 1-hour and 8-hour ozone standards were not exceeded on any day at the Arkansas Street station. During this period, state and federal standards were exceeded in the eastern part of the district and in the Santa Clara Valley.
- During the period of 1993 through 1998 at the Arkansas Street station, the state 24-hour PM₁₀ standard was exceeded in no more than 10 percent of the samples per year, the federal 24-hour standard was not exceeded at all, and the state and federal annual standards were not exceeded at all. The federal standards were not exceeded in the district.

The regional and local air quality data show that the region has made considerable progress toward meeting the state and federal standards. At this time, the region does not meet ozone standards, and violations of the state and federal standards for ozone continue to persist. Pollutants tend to be carried away from San Francisco into the more sheltered areas of the region and cause violations of the standards there. In this manner, regional benefits will occur with efforts to control San Francisco's emissions.

The emission sources that currently exist in the project area are traffic-related; most notable are the heavy volumes of traffic along the Bay Bridge and Highway 101 connection routes and the Transbay Transit Terminal ramps. Emissions due to traffic congestion dominate the localized air quality in the vicinity of the project. Because the existing project site is a mix of uses, small stationary sources of air pollutants from office and commercial activity in the project site vicinity would constitute minor sources (e.g., water heaters, print shop ventilation equipment, etc.).

IMPACTS

STANDARDS OF SIGNIFICANCE

A project would have a significant effect on the environment with respect to air quality if it would violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The BAAQMD specifies the significance criteria as follows:⁹ (1) the project impacts would be considered significant if they cause operation-related emissions equal to or exceeding an established threshold of 80 pounds per day of ROG, NO_x, or PM₁₀, or cause CO concentrations above the state ambient air quality standard; (2) the project impacts would also be considered to have a significant contribution to cumulative regional air quality effects if the project impacts exceed these standards. If project air quality impacts would not exceed the BAAQMD thresholds, the project still may be found to contribute to significant cumulative air quality impacts if the project is inconsistent with the local general plan's air quality element.¹⁰

METHODOLOGY

Regional emissions caused by project-related traffic are estimated using the CARB URBEMIS7G computer program.¹¹ URBEMIS assesses the region-wide impacts of proposed land use development based on the increased vehicle trips caused by the project. This information is provided by the project's transportation analysis.¹²

Carbon monoxide concentrations near congested intersections are analyzed using Caltrans' CALINE4 program and the *CO Protocol* from the Institute of Transportation Studies. This guidance is used to evaluate "worst-case" air quality conditions at the most heavily-impacted intersections.^{13,14} As recommended by the BAAQMD *CEQA Guidelines*,¹⁵ worst-case conditions are considered by placing receptors in locations that yield maximum exposure (at

the sidewalk corners) and by assuming a stable atmosphere where dispersion of CO in the vicinity of the intersection would be minimal.

PROJECT EFFECTS

Regional Impacts

Buildout of the proposed project would result in a total increase of approximately 1,430 vehicle trips per day. Based on URBEMIS7G modeling results, increased trips associated with the proposed development would generate approximately 43 lb/day of ROG, 48 lb/day of NO_x, and 15 lb/day of PM₁₀.¹⁶ These emissions are summarized in Table 3.¹⁷ Project development would not result in operation emissions exceeding the BAAQMD's significance thresholds for ROG, NO_x, or PM₁₀, and thus would not result in a significant impact.

TABLE 3
ESTIMATED VEHICULAR EMISSIONS FROM PROJECT-RELATED TRAFFIC

Pollutant	BAAQMD Significance Threshold (lb/day)	Project Regional Emissions /a/ (lb/day)
Reactive Organic Compounds (ROG)	80	43.3
Nitrogen Oxides (NO _x)	80	48.1
Particulate Matter (PM ₁₀)/b/	80	14.6

Notes:

- Vehicle emissions in this analysis are based on 2000 fleets. Emissions in future years will decrease as a result of cleaner burning fuels and improved engine efficiency.
- Particulate matter includes entrained road dust.

Source: EIP Associates, 2000. Emissions estimated with URBEMIS7G model.

Localized Impacts

Using the URBEMIS7G methodology described above, the project would generate about 420 pounds per day of CO. The BAAQMD has established a threshold of 550 pounds per day, above which a localized CO analysis is recommended. Although the project would not cause overall emissions of CO above this threshold, project traffic could contribute to increased localized CO concentrations in the immediate vicinity of congested intersections. The project would affect numerous intersections that have an existing Level of Service (LOS) of D, E or F. When compared to existing conditions, the LOS of the Second and Mission intersection would decrease from C to D with the project, and the project would decrease the overall LOS of the Second and Minna intersection during the weekday PM peak hour to LOS D in the future conditions. These intersections were analyzed, along with the First and Mission intersection, for potential localized CO “hot-spots,” since these are where the project traffic would have the greatest potential for contributing to a CO violation.

The CALINE4 model is used to estimate CO concentrations for each of these intersections under existing conditions, existing-plus-project conditions, and future year 2015 cumulative conditions.¹⁸ Table 4 shows that congestion at these intersections would generate maximum roadside concentrations of approximately 8.3 ppm of CO on a one-hour basis and 6.1 ppm of CO on an eight-hour basis. These concentrations would not exceed state or federal CO standards, and thus would not be considered significant.

Cumulative Impacts

The San Francisco Bay Area Air Basin is a nonattainment area for ozone. Ozone is created region-wide by atmospheric chemical reactions between reactive organic gases (ROG) and oxides of nitrogen (NO_x), in the presence of ultraviolet sunlight in warm temperatures.

TABLE 4
LOCALIZED CO CONCENTRATIONS AT SELECTED INTERSECTIONS

Location	1-Hour Total CO Concentrations (ppm) ¹			
	1-hr Standard ²	Existing	Existing-Plus-Project	Cumulative Year 2015
Second/Minna	20 ppm	7.4	7.5	N/A ⁴
Second/Mission	20 ppm	8.3	8.3	5.3
First/Mission	20 ppm	8.2	8.2	5.2

Location	8-Hour Total CO Concentrations (ppm) ¹			
	8-hr Standard ²	Existing	Existing-Plus-Project	Cumulative Year 2015
Second/Minna	9 ppm	5.6	5.6	N/A ⁴
Second/Mission	9 ppm	6.0	6.1	3.9
First/Mission	9 ppm	6.0	6.0	3.9

Notes:

1. Total concentrations are based on CALINE4 output including background ambient CO concentrations of 5.9 ppm for a 1-hour averaging time and 4.2 ppm an 8-hour averaging time (2002).
2. The State one-hour standard is 20 ppm; the Federal standard is 35 ppm. The more stringent standard is reflected in the table. The State and Federal 8-hour standard is 9 ppm.
3. Future concentrations are reduced compared with existing concentrations due to lower emissions factors which result from cleaner burning fuels and improved engine efficiency.
4. Traffic data not available.

Source: EIP Associates, 2000.

Therefore, all regional emissions of ROG and NO_x contribute to cumulative regional increases in ozone levels. The BAAQMD's planning efforts aim to reduce ozone levels while allowing growth to occur, and the BAAQMD *CEQA Guidelines* establish the criteria for identifying significant contributions to cumulative air quality impacts, as noted above under Standards of Significance.

As shown above, the project individually would not be expected to have any significant air quality impacts. The project would also not conflict with relevant objectives in the Air Quality Element of the *San Francisco General Plan*. Based on this information, the project would not be expected to contribute significantly to cumulative air quality impacts, and no further analysis of cumulative impacts is necessary.

NOTES - Air Quality

1. National Ambient Air Quality Standards have been established for criteria pollutants, named for the "criteria" documents that justified their regulation.
2. BAAQMD, 1997 Clean Air Plan, and Triennial Assessment, adopted by the Board of Directors, December 17, 1997.
3. San Francisco Bay Area Ozone Attainment Plan for the 1-Hour National Ozone Standard, Adopted June 1999. Bay Area Air Quality Management District.
4. City and County of San Francisco, Planning Department, *Air Quality - An Element of the General Plan of the City and County of San Francisco*, July 1997.
5. BAAQMD *CEQA Guidelines*, Assessing the Air Quality Impacts of Projects and Plans, April 1996, Revised December 1999, Appendix D.
6. The NOAA-CIRES (National Oceanic and Atmospheric Administration - Cooperative Institute for Research in Environmental Studies) Climate Diagnostics Center. San Francisco Airport observations compiled between 1961-1990.
7. BAAQMD *CEQA Guidelines*, Assessing the Air Quality Impacts of Projects and Plans, April 1996, Revised December 1999, Appendix D, pp. D-14, D-15.
8. California Air Resources Board, Ozone Data Summary (1992-1998) and PM10 Air Quality Data Summaries (1993-1997). Available at www.arb.ca.gov/aqd/aqd.htm.
9. BAAQMD *CEQA Guidelines*, Assessing the Air Quality Impacts of Projects and Plans, April 1996, Revised December 1999, Section 2.3.
10. BAAQMD *CEQA Guidelines*, Assessing the Air Quality Impacts of Projects and Plans, April 1996, Revised December 1999, Page 18.
11. San Joaquin Valley Unified Air Pollution Control District, URBEMIS7G Computer Program User's Guide, Version 3.2 - Emissions Estimations for Land Use Development Projects, August 1998.
12. *555 Mission Street Project*, Draft Transportation Impact Report, prepared by the Duffey Company, June 2000.

13. California Department of Transportation, Division of New Technology and Research, CALINE4 - A Dispersion Model for Predicting Air Pollutant Concentrations Near Roadways, June 1989.
14. Institute of Transportation Studies, University of California, Davis, Transportation Project-Level Carbon Monoxide Protocol, Revised December 1997.
15. BAAQMD *CEQA Guidelines*, Assessing the Air Quality Impacts of Projects and Plans, April 1996, Revised December 1999, Table 10, p. 35.
16. The URBEMIS7G model uses emission factors from the CARB EMFAC7G emissions model. Vehicle operating characteristics are determined by each land use type in the proposed project and the setting of the project. Default values recommended by BAAQMD *CEQA Guidelines* are used for the average trip length. Worst-case summer (ozone season) and winter (CO season) temperatures are as recommended in the URBEMIS7G User's Guide, August 1998.
17. Nominal emissions caused by project operation of stationary sources would also result from the use of electricity and natural gas at the site. These emissions would be inconsequential when compared to the project-related traffic emissions shown in Table 3, p.100.
18. According to the BAAQMD *CEQA Guidelines*, localized CO concentrations are analyzed if: (1) regional CO emissions caused by the project are greater than 550 pounds per day; (2) project traffic would impact an intersection or roadway link operating at, or cause one to operate at, Level of Service D, E, or F; or (3) project traffic would increase traffic volumes on nearby roadways having more than 100 vehicles per hour by 10% or more. Emission factors, meteorological conditions, and receptor locations are each recommended by the BAAQMD *CEQA Guidelines*.

F. GROWTH INDUCEMENT

Growth inducement analyses under CEQA consider the ways in which proposed projects could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.¹ Projects that are traditionally or most commonly considered growth inducing are those which would remove obstacles to population growth (e.g., a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas, or a new freeway may allow growth at freeway exits).

The proposed project at 555 Mission Street would include total development of about 557,000 gross square feet of office space and 8,000 gross square feet of retail space in downtown San Francisco. The project would not construct housing nor would it displace existing housing as discussed in the Initial Study, Appendix A, p. A.12.

The proposed project would be expected to add approximately 2,050 employees to San Francisco's economy for a net increase of 1,963 employees after adjusting for existing employment² (an increase of less than 0.4% over the City's 574,000 existing employees).³ This increase in employment would be about 0.3% of total employment projected for San Francisco in year 2015 (673,500 employees), and it would be about 1.4% of projected employment growth from 1995-2015 (138,500 jobs).⁴ This potential increase in employment would be small in the context of total employment in San Francisco.

Increases in a city's employment in turn increase demand for local housing. As a regional employment center, San Francisco attracts people who want to live close to where they work. These factors continue to support a strong demand for housing in San Francisco. Providing new housing to meet this strong demand is particularly difficult because the amount of land available is limited and because land and development costs are relatively high. For these reasons, San Francisco consistently ranks as one of the most expensive housing markets in the United States.

Using the City's proposed Jobs-Housing Linkage Program (formerly the Office Affordable Housing Production Program) methodology, the project would create a demand for housing about 647 net new San Francisco households.⁵ These households would increase total San Francisco households in 1995 (311,430 households) less than one-half percent (0.3%).⁶ They would be less than one-half percent (0.20%) of total households forecast for year 2015 (343,750 households) and they would be 2.1% of the household growth forecast between 1995 and 2015 (32,320 households).⁷ Project-related housing demand would be less than these levels if a greater-than-usual percentage of the proposed project's new employees were already employed elsewhere and were residents of San Francisco.

New downtown workers would increase the demand for housing in San Francisco and in other parts of the Bay Area. The project would contribute to housing construction in the City by meeting the City's Job-Housing Linkage Program. Housing developed as a result of this program would be dispersed throughout the City and subject to project-specific CEQA analysis as appropriate. The project would be built in a developed urban area, and no expansion of municipal infrastructure not already under consideration would be required to serve the project. For these reasons, the project would not be considered to result in significant growth inducement impacts.

NOTES - Growth Inducement

1. *State CEQA Guidelines*, as amended October, 1998, Section 15126.2(d).
2. Employee estimate for the proposed project's 557,095 gsf of new office space and 8,000 gsf of retail based on average employee density factors of 275 sq. ft. per office employee (conservative capacity estimate assuming 0% vacancy) and 350 sq. ft. per employee for retail space. Sources: City and County of San Francisco Planning Department and the San Francisco Redevelopment Agency, *Mission Bay Subsequent EIR*, SCH No. 97092068, Volume III, p. C.4, Table C.6, Density Factors and Assumptions for Estimating Employment for the Proposed Project (from Final Mission Bay EIR, 1990, Volume III, Appendices, p. XIV.A.10, Table XIV.A.2, Density Factors and Assumptions for Estimating Project Area Employment).
3. City and County of San Francisco Planning Department, 1999 Commerce and Industry Inventory, San Francisco Economic Summary, January 2000.

4. City and County of San Francisco Planning Department and the San Francisco Redevelopment Agency, *Mission Bay Subsequent EIR*, SCH No. 97092068, Volume I, p. V.C.38, Table V.C.8, Mission Bay Project Area and Rest of City Employment 1995 and 2015. Mission Bay Project Area employment estimates prepared added to "Rest of City" estimates prepared by Keyser Marston Associates, Inc., *San Francisco Cumulative Growth Scenario, Final Technical Memorandum*, prepared for the San Francisco Redevelopment Agency, August 27, 1998, revised March 30, 1998.
5. Total project employment at buildout minus existing employment capacity on site. The methodology of the Office Affordable Housing Production Program Ordinance (City and County of San Francisco Planning Code, Section 313) applies only to office development. However, the methodology is used in this Initial Study (as it has in other recent environmental assessments such as the Mission Bay SEIR) to approximately estimate total demand for housing associated with total project employment for informational purposes. Households associated only with office employment are also stated in this Initial Study. To more accurately estimate housing demand for today's socioeconomic conditions, the proposed updated assumptions include 55% of new employees will live in the City in households with an average of 1.6 workers per household (City and County of San Francisco Planning Department and the San Francisco Redevelopment Agency, *Mission Bay Subsequent EIR*, SCH No. 97092068, September 1998, Volume IV, Appendix C, p. C.8, Table C.8, Jobs/Housing Analysis for the Proposed Project).
6. City and County of San Francisco Planning Department and the San Francisco Redevelopment Agency, *Mission Bay Subsequent EIR*, SCH No. 97092068, Volume I, p. V.C.39, Table V.C.9, Mission Bay Project Area and Rest of City Households, Population, and Employed Residents, 1995 and 2015. Mission Bay Project Area estimates added to "Rest of City" estimates prepared by Keyser Marston Associates, Inc., *San Francisco Cumulative Growth Scenario, Final Technical Memorandum*, prepared for the San Francisco Redevelopment Agency, August 27, 1998, revised March 30, 1998.
7. City and County of San Francisco Planning Department and the San Francisco Redevelopment Agency, *Mission Bay Subsequent EIR*, SCH No. 97092068, Volume I, p. V.C.39, Table V.C.9, Mission Bay Project Area and Rest of City Households, Population, and Employed Residents, 1995 and 2015. Mission Bay Project Area estimates added to "Rest of City" estimates prepared by Keyser Marston Associates, Inc., *San Francisco Cumulative Growth Scenario, Final Technical Memorandum*, prepared for the San Francisco Redevelopment Agency, August 27, 1998, revised March 30, 1998.

IV. MITIGATION MEASURES PROPOSED TO MINIMIZE POTENTIAL ADVERSE IMPACTS OF THE PROJECT

In the course of project planning and design, measures have been identified that would reduce or eliminate potential environmental impacts of the project. Some of these measures have been, or would be, adopted by the project sponsor and, therefore, are proposed as part of the project; some are under consideration. Implementation of some measures may be the responsibility of public agencies.

Each mitigation measure and its status is discussed below. Measures from the Initial Study (see Appendix A, p. A.1) proposed as part of the project are indicated with an asterisk (*) and follow mitigation measures of topics discussed in the EIR. Mitigation measures identified in this EIR and in the Initial Study would be required by decision makers as conditions of project approval unless they are demonstrated to be infeasible based on substantial evidence in the record.

A. TRANSPORTATION

MITIGATION MEASURES IDENTIFIED IN THIS REPORT

Under the Cumulative 2015 Conditions, level of service at five study area intersections would degrade to LOS E or F and 555 Mission Street would have a noticeable contribution to cumulative traffic growth at four of those intersections: Second/Mission, Second/Howard, First/Mission, and First/Howard. To reduce project contributions to congestion at the local intersections, the project sponsor would be required to implement a Transportation Management Program (TMP) consistent with Planning Code Section 163 and would be required to pay a one time fee under the Transportation Impact Development Fee (TIDF)

program to support transit downtown. In addition, the following mitigation measures would reduce, but not eliminate p.m. peak hour vehicle trips associated with the project.

1. As required by the Planning Code, prepare and implement a Transportation Management Program. The TMP shall include, but not be limited to features such as:
 - a. A prohibition on daily, weekly or monthly discounted parking rates
 - b. A marketing program for commute alternatives with enough variety to appeal to differing needs of employees of different firms in the building, including features such as employee information packets; regular distribution throughout the project building of information on transportation system changes, such as new or changed transit routes; and regular distribution of information promoting use of public transit, ridesharing, and flextime.
 - c. A requirement that large employers within the project building either provide for their employees to set aside pre-tax funds for transit expenses under Section 125 of the Internal Revenue Code, or provide subsidized transit passes and transit debit cards to building employees.
2. As noted above, as a part of the requirements of Section 163 of the Planning Code, a TMP is required to be developed by the project sponsor and approved by the Director of Planning. Based on Planning Department guidance as contained in *Transportation Management Programs in Greater Downtown - Developer's Manual for Procedures and Performance Criteria* (January 1988), the project's TMP would include a project-specific numerical goal for reducing commute travel by single occupancy vehicles. This numerical goal shall be set at a level which acknowledges the project's proximity to substantial transit services. At a minimum, the goal shall be set at a level that would require commuters to/from the project site to achieve a lower percentage use of single-occupant vehicles than the average percentage by workers in buildings in the C-3 district of San Francisco with Section 163 Transportation Management Programs.
3. Implement a parking rate structure at the project garage which is both consistent with San Francisco Planning Code Section 155 and other permit approval and Planning Code requirements, and also provides a financial disincentive for vehicles to exit the garage during the p.m. peak period of congestion (4:30 to 6:30). The peak period financial disincentive for vehicles parking more than four hours and leaving during the peak period shall be no less than a surcharge equal to the public rate for one hour of parking in the same garage.

The following potential mitigation measures are identified for consideration by the Department of Parking and Traffic to reduce the cumulative impacts at the identified intersections and maintain acceptable levels of service.

4. Second/Mission: Monitor traffic operations at the Second and Howard Street intersection as traffic increases over the next fifteen years. When the traffic operations degrade to LOS E, remove parking along northbound Second Street, approaching Mission Street, during the peak hours to improve the intersection operations to LOS C. This would add an exclusive right-turn lane and create one combined through-left lane and one through lane.
5. Second/Howard: Monitor traffic operations at the Second and Howard Street intersection as traffic increases over the next fifteen years. When the traffic operations degrade to LOS E, remove parking along Second Street at the southbound intersection approach to Howard Street during the peak hours to improve the intersection operations to LOS C. This would add an exclusive right turn lane and create two through lanes.

B. AIR QUALITY

MITIGATION MEASURES PROPOSED AS PART OF THE PROJECT

- *6. The project sponsor would require its contractors to implement as appropriate the BAAQMD's guidelines on basic control measures for emissions of dust during construction: (1) water all active construction areas at least twice daily; (2) cover all trucks hauling soil, sand, and other loose materials or require trucks to maintain at least two feet of freeboard; (3) pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas; (4) sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas; and (5) sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.

C. NOISE

MITIGATION MEASURES PROPOSED AS PART OF THE PROJECT

- *7. If pile driving is necessary to install pile foundations, the project sponsor would require construction contractors to predrill holes to the maximum depth feasible on the basis of

soil conditions. Contractors would be required to use construction equipment with state-of-the-art noise shielding and muffling devices. The project sponsor would also require that contractors schedule pile driving activity for times of the day that would be consistent with Section 2908 of the San Francisco Police Code.

D. GEOLOGY / TOPOGRAPHY

MITIGATION MEASURES PROPOSED AS PART OF THE PROJECT

- *8. The project sponsor would ensure that the construction contractor conducts a pre-construction survey of existing conditions and monitors any adjacent buildings for damage during construction, if recommended by the geotechnical engineer, in the foundation investigations.
- *9. If dewatering were necessary, the final foundation report would address the potential settlement and subsidence impacts of this dewatering. Based on this discussion, the foundation report would determine whether or not a lateral movement and settlement survey would be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey were recommended, the Department of Building Inspection would require that a Special Inspector (as defined in Article 3 of the San Francisco Building Code) be retained by the project sponsor to perform this monitoring. Instruments would be used to monitor potential settlement and subsidence. If, in the judgment of the Special Inspector, unacceptable movement were to occur during construction, groundwater recharge would be used to halt this settlement. The project sponsor would delay construction if necessary. Costs for the survey and any necessary repairs to service lines under the street would be borne by the project sponsor.

If dewatering were necessary, the project sponsor and its contractor would follow the geotechnical engineers' recommendations regarding dewatering to avoid settlement of adjacent streets, utilities, and buildings that could potentially occur as a result of dewatering.

- *10. If the project sponsor and its contractor would follow the geotechnical engineers' recommendations regarding installation of settlement markers around the perimeter of shoring to monitor any ground movements outside of the shoring itself. Shoring systems would be modified as necessary in the event that substantial movements are detected.

E. WATER QUALITY

MITIGATION MEASURES PROPOSED AS PART OF THE PROJECT

The project sponsor would ensure that groundwater from site dewatering and stormwater runoff meets the discharge limitations of the City's Industrial Waste Ordinance by carrying out the following:

- *11. If dewatering were necessary, the project sponsor would follow the recommendations of the geotechnical engineer or environmental remediation consultant, in consultation with the Bureau of Environmental Regulation and Management of the San Francisco Public Utilities Commission, regarding treatment, if any, of pumped groundwater prior to discharge to the combined sewer system.

If dewatering were necessary, groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this were found to be necessary by the Bureau of Environmental Regulation and Management of the San Francisco Public Utilities Commission to reduce the amount of sediment entering the combined sewer system.

- *12. The project sponsor would require the general contractor to install and maintain sediment traps in local storm water intakes during construction to reduce the amount of sediment entering the combined sewer system, if this were found to be necessary by the Bureau of Environmental Regulation and Management of the San Francisco Public Utilities Commission.

F. HAZARDS

MITIGATION MEASURES PROPOSED AS PART OF THE PROJECT

- *13. In addition to local, state and federal requirements for handling soil and groundwater containing designated levels of chemicals, the project sponsor would enter into a voluntary remedial action agreement with the Department of Public Health pursuant to Health and Safety Code Section 101480 *et seq.* At a minimum, the project sponsor would undertake the following work and any additional requirements imposed by the Department of Public Health under the agreement. Potential remedial action, if

appropriate, could involve such measures as natural attenuation, bioremediation, vapor extraction, or excavation and disposal.

- a. A Phase II Environmental Site Assessment would be prepared for the project site. On the basis of historical uses and the conclusions of the Phase I Environmental Site Assessment, soil or groundwater samples, or both, would be collected throughout the project site as directed by the site assessment consultant. Sampling would extend at least to depths proposed for excavation. The samples would be analyzed to identify and quantify any contamination. These studies would be completed by a Registered Environmental Assessor (REA) or a similarly qualified individual prior to initiating any earth-moving activities at the site.

If findings in the Phase II report result in the preparation of a Site Safety and Health Plan, in addition to measures that protect on-site workers, the Plan would include measures to minimize public exposure to contaminated soils. Such measures would include dust control, appropriate site security, restriction of public access, and posting of warning signs, and would apply from the time of surface disruption through the completion of earthwork construction.

- b. Prior to any demolition or excavation at the project site, surveys would be conducted to identify any potentially hazardous materials in existing buildings or building materials. At a minimum, these surveys would identify any asbestos, polychlorinated biphenyls, lead, mercury, or other hazardous materials that would require removal and disposal before demolition. Wherever former site uses or site reconnaissance observations reported in the Phase I Environmental Site Assessments suggest the potential for underground storage tanks or related piping to be present, magnetic surveys or other appropriate surveys would be conducted to locate underground storage tanks. If any are identified, the San Francisco Department of Public Health would determine whether they must be removed or whether they may be closed in place. These surveys would be completed by an REA or a similarly qualified individual.
- c. All reports and plans prepared in accordance with Mitigation Measure No. 8 would be provided to the San Francisco Department of Public Health and any other agencies identified by the Department of Public Health. When all hazardous materials have been removed from existing buildings, and soil and groundwater analysis and other activities have been completed, as appropriate, the project sponsor would submit to the San Francisco Planning Department and the San Francisco Department of Public Health (and any other agencies identified by the Department of Public Health) a report stating that the mitigation measure has been implemented. The report would describe the steps taken to comply with the mitigation measure and include all verifying documentation. The report would be certified by an REA or a similarly

qualified individual who states that all necessary mitigation measures have been implemented.

G. CULTURAL RESOURCES

MITIGATION MEASURES PROPOSED AS PART OF THE PROJECT

- *14. Given the location and depth of excavation proposed, and the likelihood that archaeological resources would be encountered on the project site, the sponsor has agreed to retain the services of an archaeologist. The archaeologist would conduct a pre-excavation testing program to better determine the probability of finding cultural and historical remains. The testing program would use a series of mechanical, exploratory borings or trenches or other testing methods determined by the archaeologist to be appropriate.

If, after testing, the archaeologist determines that no further investigations or precautions are necessary to safeguard potentially significant archaeological resources, the archaeologist would submit a written report to the Environmental Review Officer, with a copy to the project sponsor. If the archaeologist determines that further investigations or precautions are necessary, he or she would consult with the Environmental Review Officer, and they would jointly determine what additional procedures are necessary to minimize potential effects on archaeological resources.

These additional measures would be implemented by the project sponsor and could include a program of on-site monitoring of all site excavation, during which the archaeologist would record observations in a permanent log. The monitoring program, whether or not there are findings of significance, would result in a written report to be submitted first and directly to the Environmental Review Officer, with a copy to the project sponsor. During the monitoring program, the project sponsor would designate one individual on site as its representative. This representative would have the authority to suspend work at the site to give the archaeologist time to investigate and evaluate archaeological resources if they are encountered.

If evidence of cultural resources of potential significance were found during the monitoring program, the archaeologist would immediately notify the Environmental Review Officer, and the project sponsor would halt any activities that the archaeologist and the Environmental Review Officer jointly determine could damage such cultural resources. Ground disturbing activities that could damage cultural resources would be suspended for a total maximum of four weeks over the course of construction of each building.

After notifying the Environmental Review Officer, the archaeologist would prepare a written report to be submitted first and directly to the Environmental Review Officer, with a copy to the project sponsor, which would contain an assessment of the potential significance of the find and recommendations for what measure should be implemented to minimize potential effects on archaeological resources. Based on this report, the Environmental Review Officer would recommend specific additional measures to be implemented by the project sponsor. These additional measures could include a site security program, additional on-site investigations by the archaeologist, or documentation, preservation, and recovery of cultural material.

Finally, the archaeologist would prepare a report documenting the cultural resources that were discovered, an evaluation as to their significance, and a description as to how any archaeological testing, exploration or recovery program is to be conducted.

Copies of all draft reports prepared according to this mitigation measure would be sent first and directly to the Environmental Review Officer for review. Following approval by the Environmental Review Officer, copies of the final reports would be sent by the archaeologist directly to the President of the Landmarks Preservation Advisory Board and the California Archaeological Site Survey Northwest Information Center. Three copies of the final archaeology reports would be submitted to the Environmental Review Officer, accompanied by copies of the transmittals documenting its distribution.

V. OTHER CEQA CONSIDERATIONS

A. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

In accordance with Section 21100 (b)(2)(A) and 21100.1(a) of the California Environmental Quality Act (CEQA), and Section 15126.2(b) of the State CEQA Guidelines, the purpose of this chapter is to identify significant impacts that could not be eliminated or reduced to an insignificant level by implementing mitigation measures included as part of the project or by other mitigation measures that could be implemented, identified in Chapter IV, Mitigation Measures, p. 108.

Under the Cumulative 2015 Conditions, the level of service at five study area intersections would degrade to LOS E or F. The proposed project would make a noticeable contribution to cumulative traffic growth at four of the intersections and would thus be considered to have a significant cumulative impact on localized traffic congestion. Mitigation Measures that are recommended for implementation by the Project Sponsor would reduce but not eliminate these impacts. Other measures recommended to alleviate the cumulative impacts at specific intersections are under the jurisdiction of the City's Department of Parking and Traffic, and would eliminate significant cumulative traffic impacts at those intersections. The implementation of these measures is not assured, and they would not eliminate all significant cumulative impacts on traffic.

This finding is subject to confirmation by the Planning Commission as part of their action to certify the Final EIR.

VI. ALTERNATIVES TO THE PROPOSED PROJECT

This chapter identifies alternatives to the proposed project and discusses environmental impacts associated with these alternatives. Project decision-makers must approve an alternative instead of the proposed project, if that alternative would substantially lessen or avoid significant impacts of the project and is determined to be feasible. The determination of feasibility will be made by City decision-makers.

The following alternatives are evaluated in this chapter: a No-Project Alternative, a No Exception Alternative, and a Reduced Parking Alternative. Any of the alternatives could be implemented under City controls but would require many of the same approvals as the proposed project, project authorization for developing office space in Downtown San Francisco, or other requirements.

No alternative sites have been identified within downtown San Francisco where the project could be constructed and meet most of the project sponsors' objectives, and where the project's environmental effects would be substantially lessened or avoided.

A. ALTERNATIVE A: NO PROJECT

DESCRIPTION

The No-Project Alternative would entail no change to the site. The proposed project would not be built. Buildings on the project site would not be demolished and none of the existing architectural features would be altered. All unreinforced masonry buildings (UMBs) on the site would be demolished, retrofitted, or vacated by year 2004. This alternative would not preclude future proposals for redevelopment of the project site.

IMPACTS

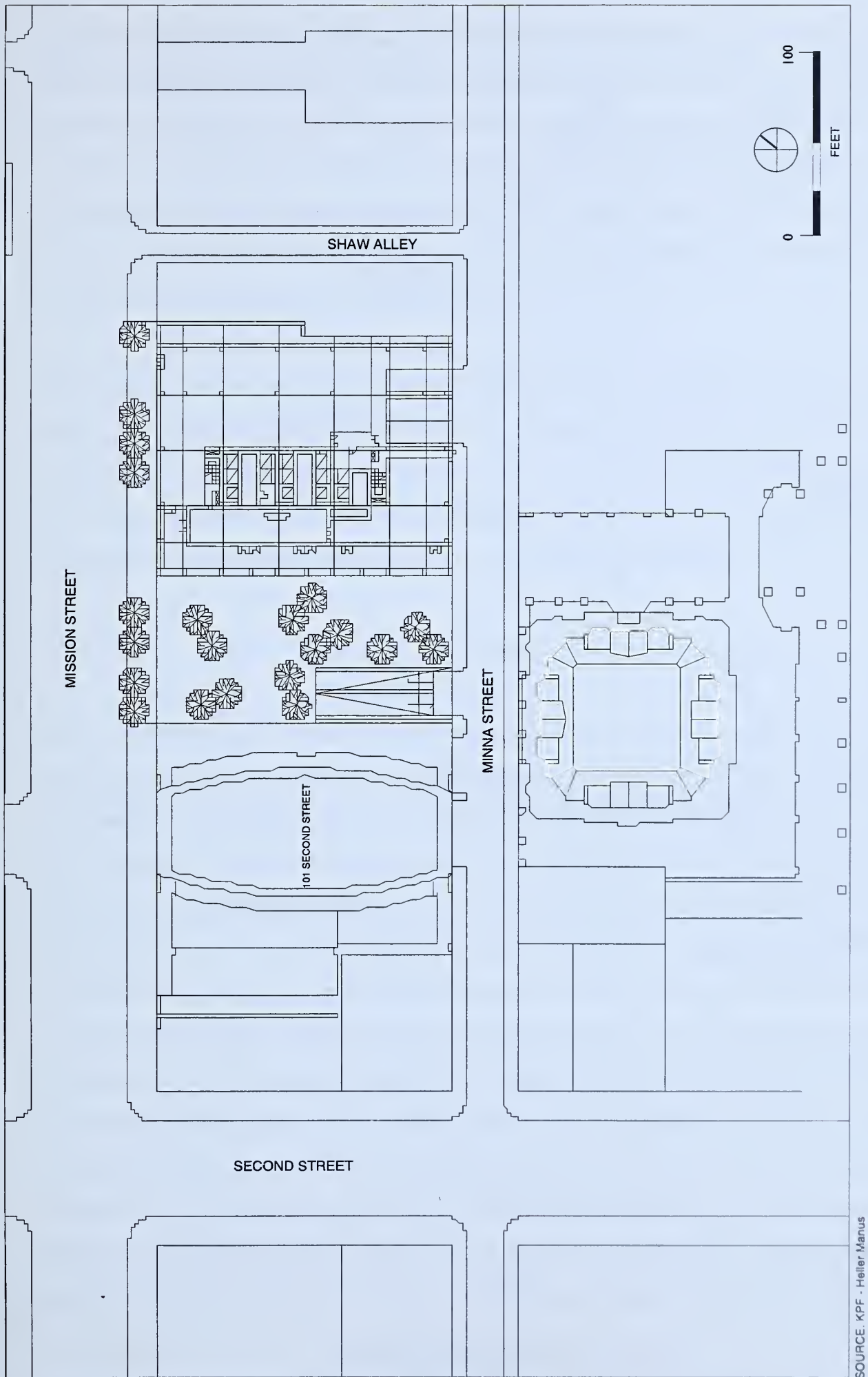
If the No-Project Alternative were implemented, none of the impacts associated with the project would occur. The environmental characteristics of this alternative would be generally as described in the environmental setting sections of Chapter III. Land use, urban design/visual quality and shadow and wind conditions would not change, except as a result of nearby development.

Although the No Project Alternative would not contribute to cumulative transportation impacts, cumulative growth at other locations in downtown would create substantial increases in commute travel, causing significant transportation impacts similar to those described in Section III.D, Transportation, but without the increment of the cumulative effect caused by the proposed project.

B. ALTERNATIVE B: NO EXCEPTION ALTERNATIVE

DESCRIPTION

The No Exception Alternative would include all of the same land uses as the proposed project (see Figures 19 and 20). Alternative B would include demolition of the existing buildings on the project site. This alternative includes development at the base FAR of 9:1 plus Transferable Development Rights for an FAR of 16.84:1, and development of parking as an accessory use (a maximum of 7% of gross floor area). In this alternative, development on the project site would include a total of about 557,000 sq. ft. of office space, similar to the proposed project. Total parking area would equal about 38,990 sq. ft., as with the project. Alternative B, as with the proposed project, would comply with the 7% of gross office floor area limit for accessory parking. This alternative would provide about 150 valet parking spaces, as with the proposed project.

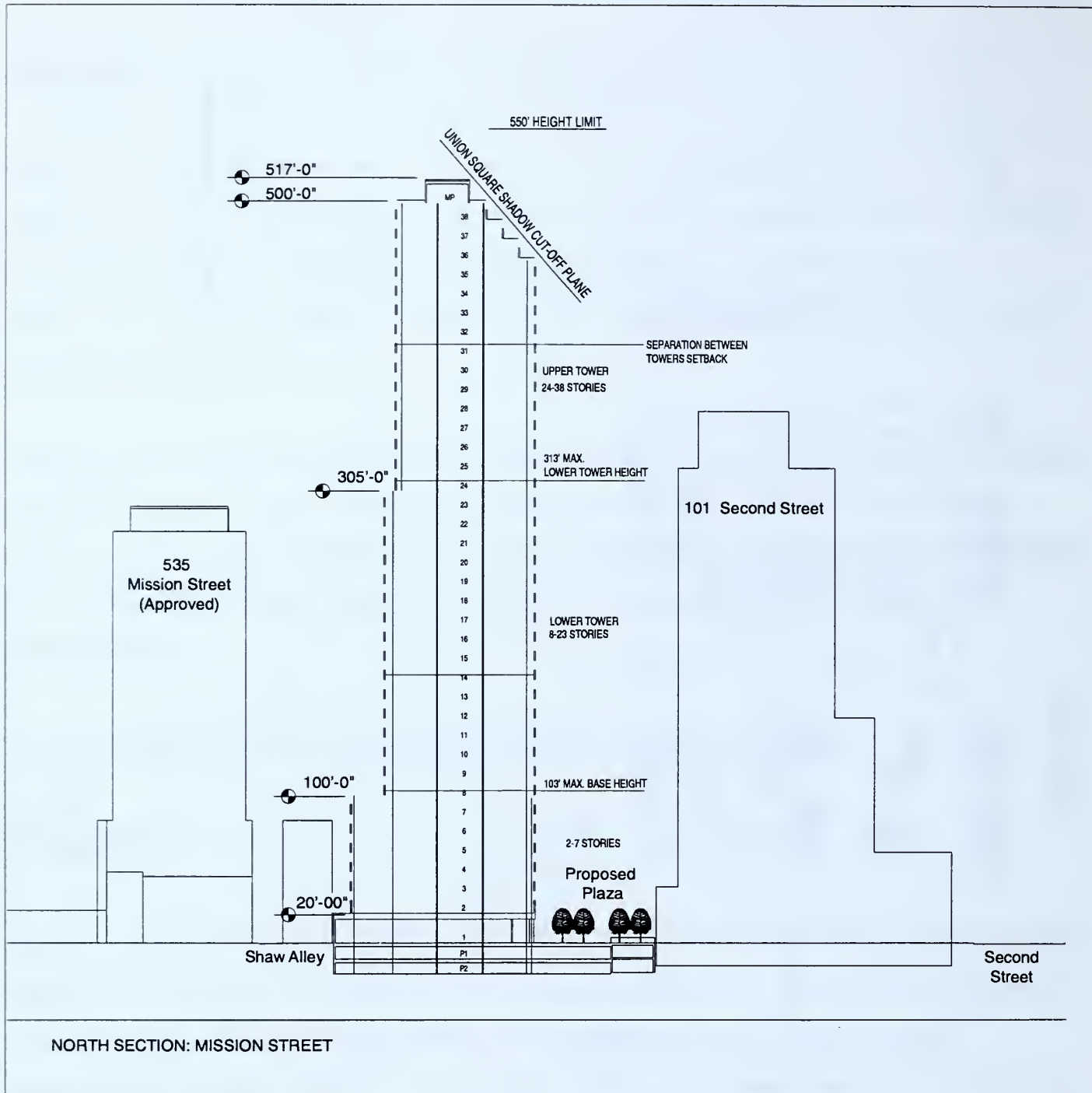


SOURCE: KPF - Heller Manus



555 MISSION STREET

FIGURE 19: ALTERNATIVE B SITE PLAN



SOURCE: KPF/ Heller Manus
NOTE: HEIGHTS SHOWN ABOVE MISSION STREET



555 MISSION STREET

FIGURE 20: ALTERNATIVE B SECTION

Alternative B would be 38 stories tall, plus a mechanical penthouse, and would be 517 feet high, including the penthouse, with the upper three floors terracing back from the western facade (see Figure 20). The proposed project would be 31 stories and 455 feet tall.

Alternative B would meet Planning Code Section 270 requirements for maximum and average floor size, maximum diagonal measurement, and maximum length for the building base, lower tower, and upper tower. The 500-foot height plus 17-foot penthouse would meet the 550-foot height district for that portion of the site.

With this alternative, no exceptions from the Planning Code would be needed for building bulk. In comparison, the proposed project would require exceptions, under Planning Code Section 272, to exceed lower tower average floor area limits of 17,000 sq. ft., by about 2,000 sq. ft., and upper tower average floor area limits of 12,000 sq. ft., by about 5,000 sq. ft. Transferable development rights would be included in this alternative.

IMPACTS

This alternative would include demolition of all existing structures on the project site, and would develop the site with office and ground-floor retail uses more intensely than is now found at the site. Overall, land use conditions would change in a similar manner as described for the project. The change in height and bulk would not result in substantially different conclusions regarding urban design or visual quality effects from those described for the proposed project. As with the proposed project, Alternative B would not substantially degrade existing visual character or quality of the area, or result in a substantial, demonstrable negative visual aesthetic effect. While the 517-foot Alternative B would be about 60 feet taller than the proposed project, the alternative would have similar visual effects as the proposed project in short-range and long-range views. Wind effects from Alternative B would not be substantially different from those analyzed for the proposed project; no exceedances of the hazardous wind criterion would occur with Alternative B. Alternative B would not cast shadows on any Recreation and Park Department open spaces covered by Section 295. Some portions of the street and sidewalk on Mission Street near the proposed project site would be shaded during

midday periods. The proposed project plaza would be partially shaded at certain times of the day and during certain seasons. The sidewalk on Mission Street in front of Golden Gate University, the Golden Gate University entry plaza, and Leadership High School would also be shaded by Alternative B. These would not be considered significant shadow effects.

Traffic and transit impacts would be essentially the same as those described for the proposed project, because the building space would not change, resulting in the same trip generation from the project site. The amount of traffic estimated to be caused by a proposed project is based on the number of person trips generated by the various proposed uses in a project. Alternative B would contribute to significant cumulative traffic impacts in the future at a similar level to the project's contribution. Alternative B itself would not have any significant traffic effects. Air quality impacts from traffic generated by development under Alternative B would be similar to those described for the proposed project for both project-level and cumulative cases.

As with the proposed project, Alternative B would create a parking shortfall of about 115 spaces. As discussed in Section III.D, Transportation, above, lack of parking spaces is not considered to be a significant physical environmental impact in San Francisco. Providing parking in amounts less than demand conforms with *General Plan* policies discouraging automobile use and encouraging transit use in San Francisco. To the extent that a constrained parking supply and high parking rates provide less incentive to commute to the project area by single-occupant automobile, providing less parking at the project site may contribute to a shift to carpool and transit use.

C. ALTERNATIVE C: REDUCED PARKING

DESCRIPTION

The Reduced Parking Alternative would include all of the same land uses as the proposed project. Alternative C would include demolition of the existing buildings on the project site. The Reduced Parking Alternative would be similar to the project, except for the reduction

in parking to one level of underground parking (70 parking spaces total). Similar to the proposed project, Alternative C includes development at the base FAR of 9:1 plus Transferable Development Rights for an FAR of 16.4:1, development on the project site would include a total of about 557,000 sq. ft. of office space as with the proposed project, 8,000 sq. ft. of retail space, and approximately 11,000 sq. ft. of ground-level open space.

Alternative B would be 31 stories tall, plus a mechanical pent-house, and would be 455 feet high, including the parapet. Similar to the proposed project, Alternative C would require exceptions, under Planning Code Section 272, to exceed lower tower average floor area limits of 17,000 sq. ft., by about 2,000 sq. ft., and upper tower average floor area limits of 12,000 sq. ft., by about 5,000 sq. ft.

IMPACTS

The Reduced Parking Alternative would include demolition of all existing structures on the project site, and would develop the site with office and ground-floor retail uses more intensely than is now found at the site. Overall, land use conditions or changes in height and bulk, urban design or visual quality, shadow or wind, or growth inducement would not result in substantially different conclusions from those described for the proposed project (see Chapter III).

The Reduced Parking Alternative would generate about 1,035 net new PM peak hour person trips and potentially 265 net new PM peak hour vehicle trips, the same as the proposed project. With the reduced parking supply, more employees and visitors to the project site would be forced to find parking at other locations or to shift their mode of travel. The number of vehicle trips exiting Minna Street would be reduced from approximately 155 to 70 trips during the PM peak hour.

If employees and visitors to the site were to continue to drive rather than shift their mode of travel, it would be expected that parking would be available in the more remote locations south

of Folsom Street. These trips would be removed from travel through the study area intersections on and north of Folsom Street, but travel would be added to intersections south of the study area. The Reduced Parking Alternative would reduce the project contribution to the Cumulative significant impacts in the study area as noted below in Table 5. The Cumulative 2015 intersection LOS would not change.

TABLE 5
PROJECT CONTRIBUTION TO CUMULATIVE 2015 IMPACTS¹

Intersection	LOS	Proposed Project	Reduced Parking Alternative
		Project %	Project %
Second/Mission	E	13.5%	7.1%
Second/Howard	E	28.8%	18.6%
First/Mission	F	14.3%	6.9%
First/Howard	F	13.2%	9.6%

Note:

1. Table 5 represents the percent of the Project and the Alternative's contribution to growth between 2000 and 2015.

Source: The Duffey Company

The reduction in parking, in conjunction with the implementation of a Transportation Management Program in conformance with Planning Code Section 163, would likely result in a shift to other modes of travel including transit, pedestrian, and bicycle, consistent with the City's Transit First Policy.

The parking shortfall for the proposed project of 150 valet parking spaces would be 460 spaces. The parking shortfall for Alternative C would be 540 spaces. With the reduction in parking on-site, the competition for existing parking spaces in the South of Market area would be increased. The project parking shortfall would not be considered a significant impact under the City's Transit First Policy.

VII. DRAFT EIR DISTRIBUTION LIST

Copies of this Draft EIR or notices of its availability and Draft EIR hearing were mailed or delivered to the following public agencies, organizations, and individuals.

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Stanford University Libraries
Jonsson Library of Government Documents
State & Local Documents Division
Stanford, CA 94305

Institute of Government Studies
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University of California
Berkeley, CA 94720

Hastings College of the Law - Library
200 McAllister Street
San Francisco, CA 94102-4978

Government Publications Department
San Francisco State University
1630 Holloway Avenue
San Francisco, CA 94132

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San Francisco, CA 94102

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PROJECT AREA TENANTS AND OWNERS

Tenants and other property owners in the project area, approximately 50 parties, were sent notices of availability of the Draft EIR and Draft EIR public hearing. A complete copy of the distribution listing is available in the Planning Department office at 1660 Mission Street, as part of File No. 1999.603E.

VIII. REPORT PREPARERS; ORGANIZATIONS AND INDIVIDUALS CONSULTED

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APPENDIX A. INITIAL STUDY/EIR REQUIREMENT

**NOTICE THAT AN
ENVIRONMENTAL IMPACT REPORT
IS DETERMINED TO BE REQUIRED**

Date of this Notice: May 6, 2000

Lead Agency: Planning Department, City and County of San Francisco
1660 Mission Street, 5th Floor, San Francisco, CA 94103-2414
Agency Contact Person: Hillary E. Gitelman **Telephone:** (415) 558-5980

Project Title: 1999.603E, 555 Mission Street
Project Sponsor: Tishman Speyer Properties
Project Contact Person: Ezra Mersey
Telephone: (415) 536-1850

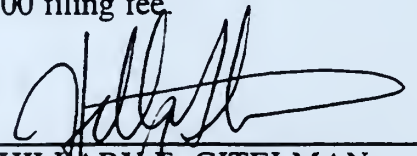
Project Address: 555 Mission Street
Assessor's Block(s) and Lot(s): 3721 / 69, 70, 78, 79, 80, and 81
City and County: San Francisco

Project Description: The proposed project would demolish the six existing buildings on the project site and construct a 31-story building about 420 feet to the top of the roof with a 35-foot high parapet, or 455 feet including the parapet. The total office area in the project would be approximately 557,095 gross sq. ft. There would be approximately 9,100 sq. ft of lobby space, 8,000 sq. ft. of ground-floor retail space intended for food services, business services, and other incidental and support uses, and 68,000 sq. ft. in two below-grade parking levels totaling about 150 spaces (with attendant parking). The project would provide open space, consisting of a plaza adjacent to the building, totaling approximately 11,000 sq. ft. The plaza would include landscaping and seating areas. The plaza would also serve as a pedestrian connection between Minna and Mission Streets. The project site is entirely within the C-3-O (Downtown Office) zoning district with a base floor area ratio (FAR) of 9:1. Lots 69, 78, 80, and 81 are in a 550-S Height and Bulk District. Lot 70 is in a 500-S Height and Bulk District.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Section 15063 (Initial Study), 15064 (Determining Significant Effect), and 15065 (Mandatory Findings of Significance), and the following reasons, as documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

Deadline for Filing of an Appeal to the City Planning Commission of this Determination that an EIR is required: June 5, 2000 at 5:00 p.m.

An appeal requires: 1) a letter specifying the grounds for the appeal; and,
2) a \$209.00 filing fee.


HILLARY E. GITEMAN
Environmental Review Officer
Planning Department

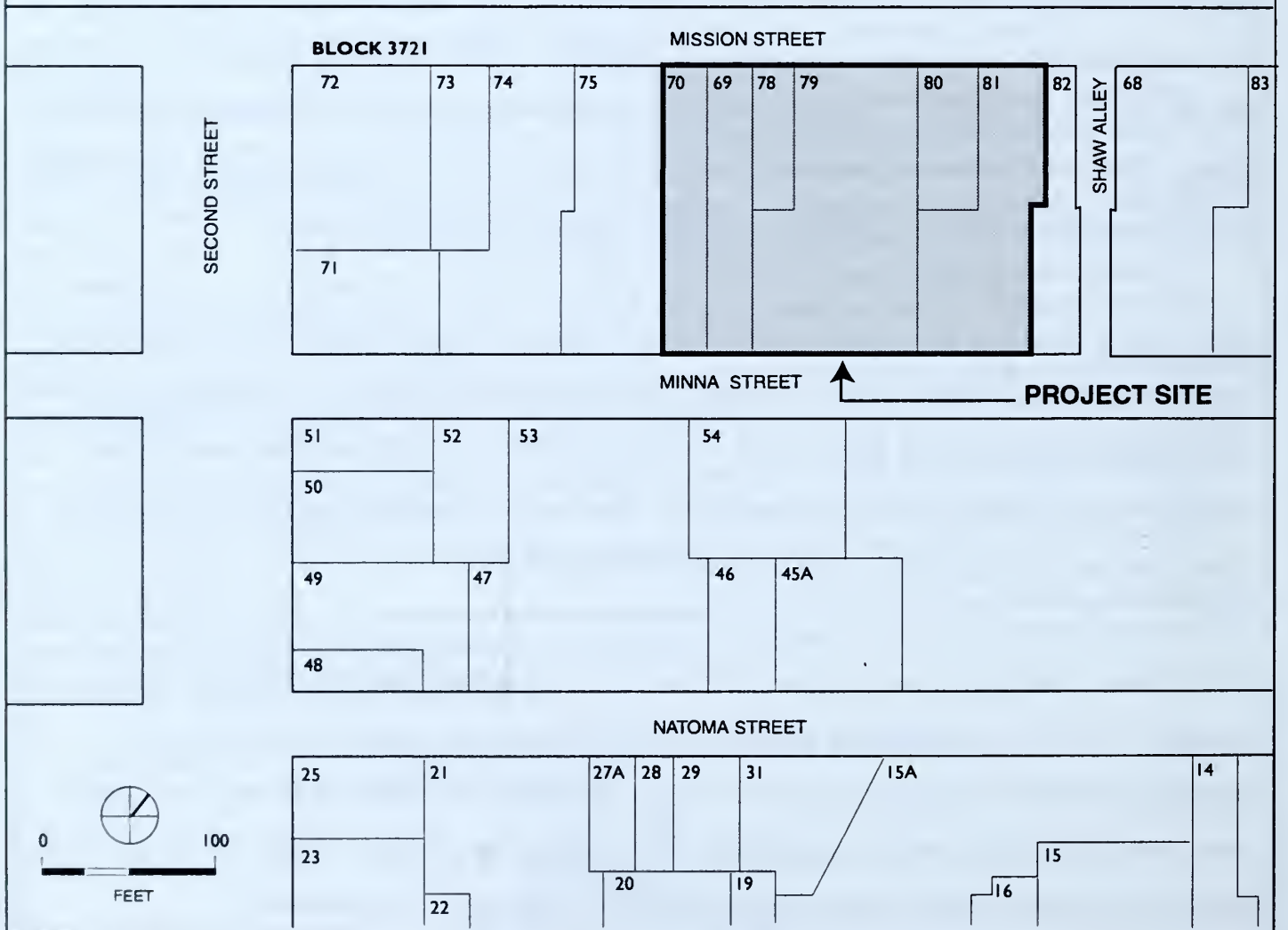
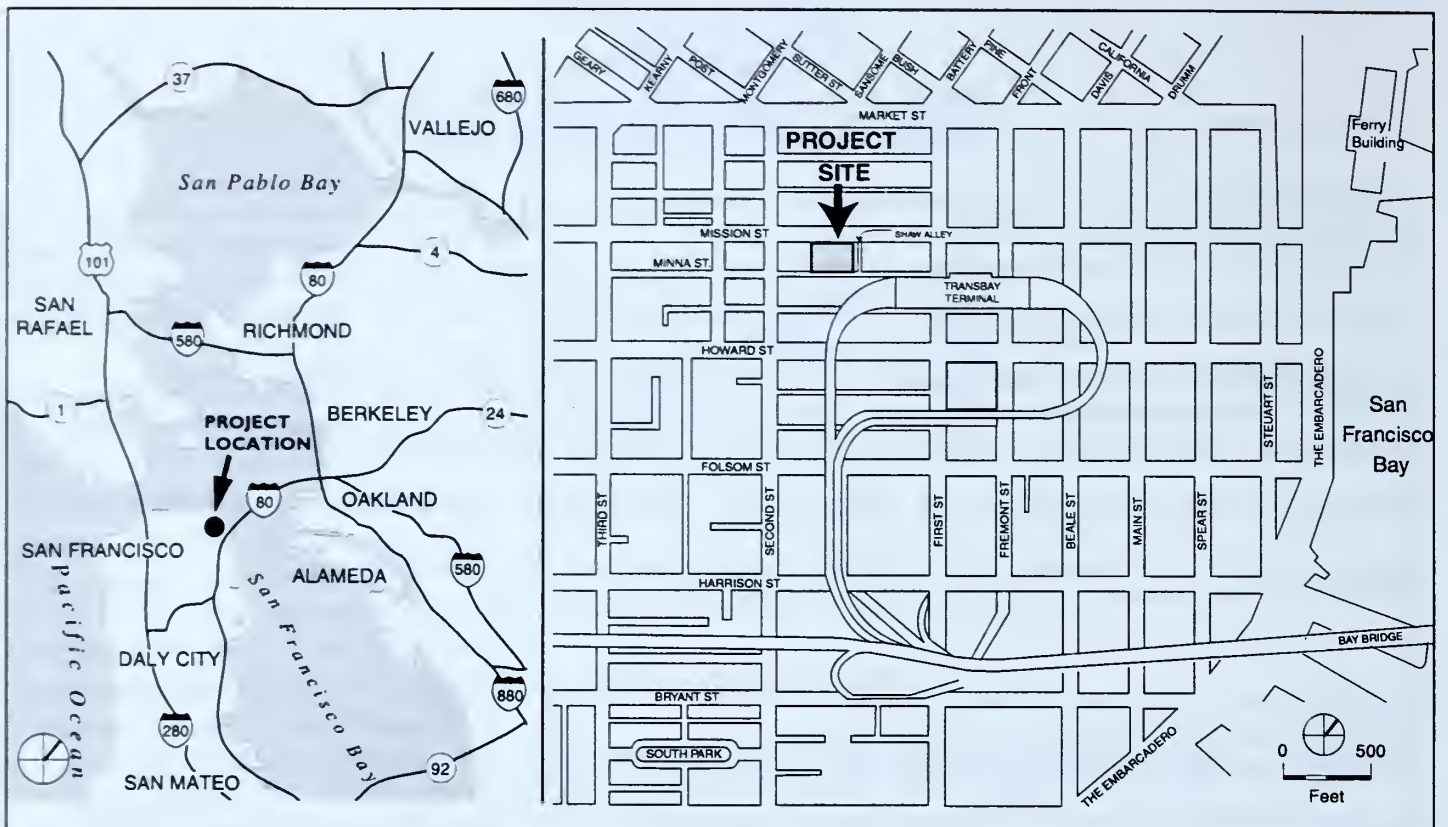
I. PROJECT DESCRIPTION

The 555 Mission Street project site is on the block bounded by Mission, Shaw, Minna, and Second Streets, as shown on Figure 1. Tishman Speyer Properties, the project sponsor, proposes to demolish the six existing buildings on the project site and construct a 31-story, 455-foot-tall, 642,000-gross-sq.-ft. office tower. The project would include ground-floor retail space, two levels of below-grade parking and a pedestrian plaza (see Figure 2).

Existing uses on the site consist of a mix of office and retail activities. The six existing buildings on the site are two to four stories, and all of them were originally constructed between 1906 and 1913. The site is approximately 34,293 sq. ft., 215 ft. fronting Mission Street with lots 160 feet deep. The site is on Assessor's Block 3721 and includes six lots: Lots 69, 70, 78, 79, 80, and 81. The project site is entirely within the C-3-O (Downtown Office) zoning district with a base floor area ratio (FAR) of 9:1. Lots 69, 78, 80, and 81 are in a 550-S Height and Bulk District. Lot 70 is in a 500-S Height and Bulk District.

The existing buildings are mostly occupied with a mixture of ground-floor retail, office, and service businesses. Patrick & Co., an office and print supply shop at 561 Mission Street, is the largest single use on the project site. The majority of the businesses front on Mission Street and have loading areas on Minna Street. Hathaway Dinwiddie Construction and Steve Alley Cuts are the exceptions, with frontage on Minna Street.

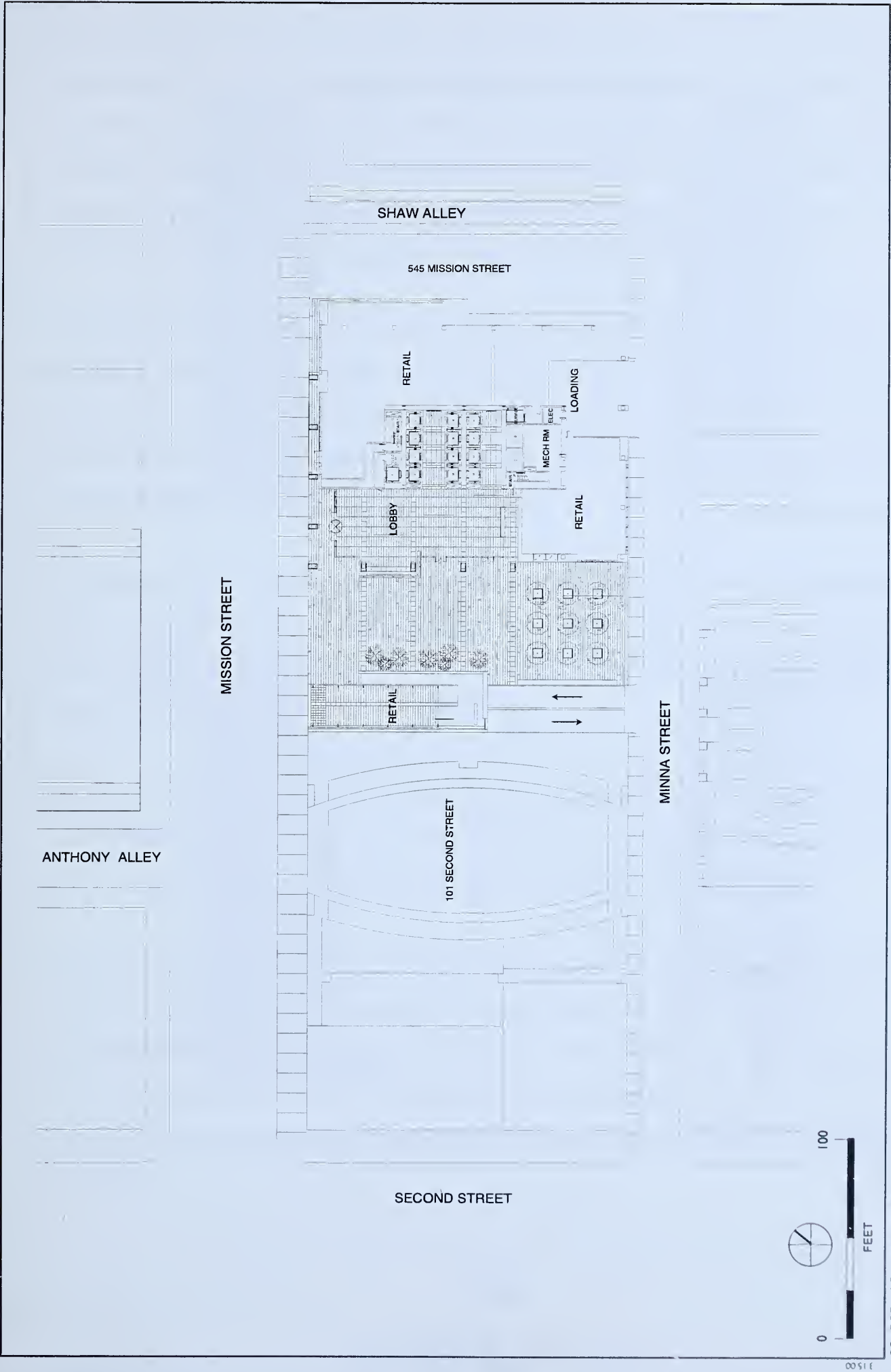
The 31-story building would be about 420 feet to the top of the roof with a 35-foot-high parapet, or 455 feet including the parapet. At the fifth and the twenty-fourth floors the building would be set back by varying distances (see Figure 3). The lower tower and upper tower would not meet setback requirements in Planning Code Section 270(d). The total office area in the project would be approximately 557,095 gross sq. ft. There would



SOURCE: EIP Associates



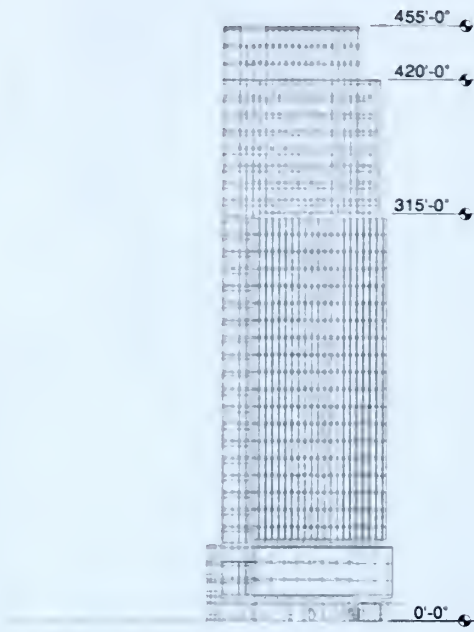
555 MISSION STREET
FIGURE I: PROJECT LOCATION



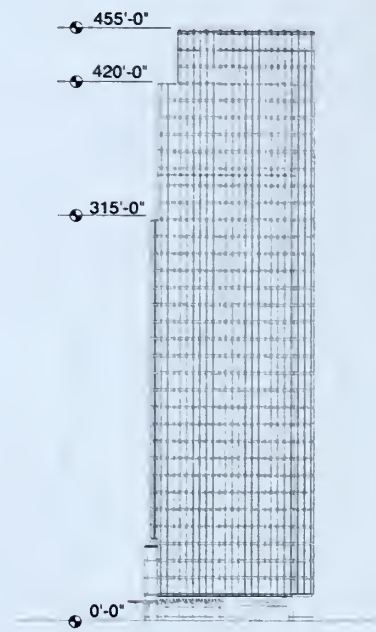
SOURCE: KPF - Heller Manus



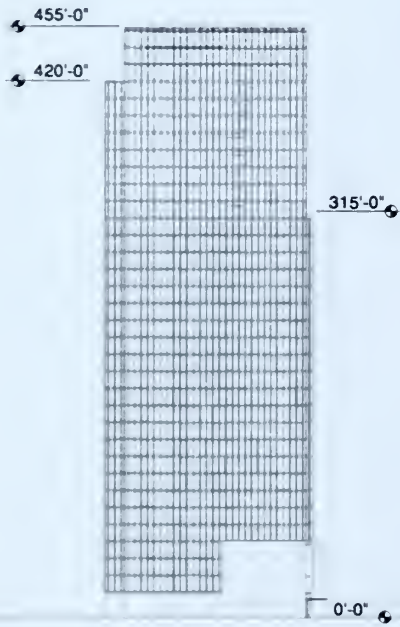
545 MISSION STREET
FIGURE 2: GROUND FLOOR PLAN



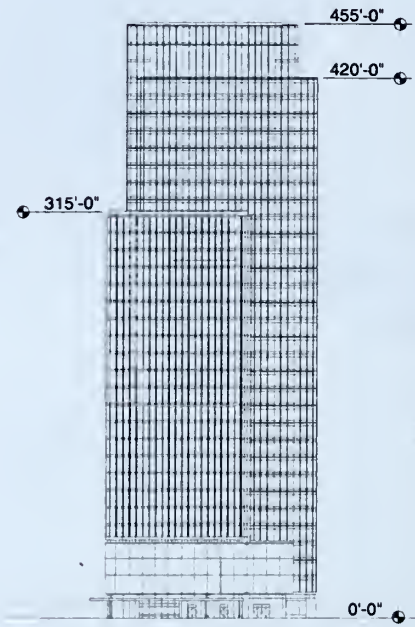
NORTH ELEVATION: MISSION STREET



SOUTH ELEVATION: MINNA STREET



EAST ELEVATION: SHAW ALLEY



WEST ELEVATION: PLAZA

NOTE: HEIGHTS SHOWN ABOVE MISSION STREET

SOURCE: KPFF / Heller Manus



555 MISSION STREET

FIGURE 3: PROJECT ELEVATIONS

be approximately 9,100 sq. ft of lobby space, 8,000 sq. ft. of ground-floor retail space intended for food services, business services, and other incidental and support uses, and 68,000 sq. ft. in two below-grade parking levels totaling about 150 spaces (with attendant parking). Entrances/exits to the underground parking levels would be from Minna Street (see Figure 2). The project would provide two loading and two service vehicle spaces. The loading dock entrance for the project would be from Minna Street (see Figure 2).

The project would provide open space, consisting of a plaza adjacent to the building, as shown on Figure 2, totaling approximately 11,000 sq. ft. The plaza would include landscaping and seating areas. The plaza would also serve as a pedestrian connection between Minna and Mission Streets. Project design and programming are not yet complete; as in all projects, some refinement is expected during the review process.

Excavation would be required for construction of the parking garage and building foundation system, which would remove up to approximately 31,750 cubic yards of soil. Development would likely begin by approximately 2001, and construction would take approximately 24 months. Construction would require pile driving.

The project would involve purchase and use of Transferable Development Rights (TDR) from other parcel(s) in the C-3 Districts. The project's floor area ratio (FAR) would be about 16.4:1. The C-3-O district permits buildings with FAR up to 18:1 with TDR.

The project would require 1) review under Planning Code Section 309 for compliance with the downtown provisions of the Planning Code and exceptions to the bulk requirements as permitted in Planning Code Section 272; 2) project authorization under Planning Code Section 321 for office development; and 3) Conditional Use authorization under Planning Code Sections 204.5, 157 and 303 for parking space in excess of the maximum 7% of total gross floor area.

II. SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS

A. EFFECTS FOUND TO BE POTENTIALLY SIGNIFICANT

This Initial Study examines the 555 Mission Street project to identify its potential effects on the environment. On the basis of this study, project-specific effects that have been determined to be potentially significant relate to urban design and visual quality, transportation, operational air quality, shadows, and wind. These issues will be analyzed in the Environmental Impact Report (EIR) and their effects are described as "To Be Determined" in the checklist that follows. Land use will be discussed in the EIR for informational purposes, along with relevant plans and policies.

B. EFFECTS FOUND NOT TO BE SIGNIFICANT

The following effects of the 555 Mission Street project have been determined to be either insignificant or to be mitigated through measures included in the project: noise, construction air quality, utilities/public services, biology, geology/topography, water, energy/natural resources, hazards, archaeological resources, and architectural resources. These issues are discussed below and require no further environmental analysis in the EIR.

III. ENVIRONMENTAL EVALUATION CHECKLIST AND DISCUSSION

A. COMPATIBILITY WITH EXISTING ZONING AND PLANS

	<u>Not Applicable</u>	<u>Discussed</u>
1. Discuss any variances, special authorizations, changes proposed to the City Planning Code or Zoning Map, if applicable.	<u>—</u>	<u>X</u>
2. Discuss any conflicts with any other adopted environmental plans and goals of the City or Region, if applicable.	<u>X</u>	<u>X</u>

The 555 Mission Street project would require review by the Planning Commission in context of the *San Francisco General Plan* and other relevant plans. Applicable Area Plans and Elements of the *General Plan* include the Downtown Plan, the Urban Design Element, and the Commerce and Industry Element. If the project, on balance, were to have substantial conflicts with *General Plan* objectives and policies, it could not be approved.

Plans and policies will be discussed in the EIR for informational purposes. A brief summary of relevant *General Plan* policies, applicable Zoning Map and Planning Code provisions, and discussion of Transferable Development Rights will also be included.

B. ENVIRONMENTAL EFFECTS

Except for the categories of urban design and visual quality, transportation, air quality, shadows, and wind as noted above, all items on the Initial Study checklist incorporated herein have been checked "No," indicating that, upon evaluation, staff has determined that the proposed project could not have a significant adverse effect in those areas. Several checklist items have also been checked "Discussed," indicating that the text includes discussion of that particular issue. For all of the items checked "No" without discussion, the conclusions regarding potential adverse environmental effects are based on field observation, staff and consultant experience on similar projects, and/or standard reference materials available within the Planning Department such as the Department's Transportation Guidelines for Environmental Review, or the California Natural Diversity Data Base and maps, published by the California Department of Fish and Game. For each checklist item, the evaluation has considered the impacts of the project both individually and cumulatively.

Yes No Discussed

1. Land Use - Would the project:

- a. Disrupt or divide the physical arrangement of an established community?

___ X X

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
b. Have any substantial impact upon the existing character of the vicinity?	___	<u>X</u>	<u>X</u>

As noted in the project description, the project site is located between Mission, Shaw, Minna, and Second Streets. This area transitions from high-intensity office use in the Financial District to mixed low-rise commercial uses in the South of Market area. Existing land uses at the site include warehouse, office, and retail. Existing buildings on the project site are less than four stories; most are two- to four-story buildings.

In the project vicinity two- to three-story service and commercial buildings predominate; office and office support uses are increasing. Office buildings are located to the north, east, and west of the project site; 101 Second Street, an office building was recently completed directly west of the project site. Two office towers, 554 Mission Street and 535 Mission Street, have recently been approved directly to the north and east of the project site, respectively. The Transbay Transit Terminal is about one block east of the project site; Golden Gate University and Leadership High School are across Mission Street; The Century, a residential tower, is currently under construction south of the proposed project on Minna Street.

The proposed project would include office uses with ground-floor retail and subsurface parking, generally consistent with land uses and building heights in the project vicinity. Displacement of existing businesses occupying some buildings on site would occur as a result of demolition associated with the project. The project would reinforce the ongoing extension of the Financial District into the South of Market area, consistent with zoning and policies adopted as part of the Downtown Plan, an element of the *San Francisco General Plan*.

Overall, the project would be consistent with existing and planned land uses in the vicinity and would not have a substantial adverse effect on land use. However, land use, including information on business displacement, will be discussed in the EIR for informational purposes.

Yes No Discussed

2. Visual Quality - Would the project:

- | | |
|---|--|
| a. Have a substantial, demonstrable negative aesthetic effect? | <u>To Be Determined</u> |
| b. Substantially degrade or obstruct any scenic view or vista now observed from public areas? | <u>To Be Determined</u> |
| c. Generate obtrusive light or glare substantially impacting other properties? | <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border-bottom: 1px solid black; width: 20px;"></div> <div style="border-bottom: 1px solid black; width: 20px; text-align: center;">X</div> <div style="border-bottom: 1px solid black; width: 20px; text-align: center;">X</div> </div> |

The project would replace older, low-scale retail, office, and warehouse buildings with a high-rise, 31-story office tower and subsurface parking, and thus would noticeably change the scale of development on the project site. The project would be taller than existing buildings on the site, but similar to some structures nearby such as the 25-story 101 Second Street office tower at Mission and Second Streets, the approved 31-story 554 Mission Street office building, the recently approved 22-story 535 Mission Street building, and The Century, a 31-story residential tower under construction south of Minna Street. Views from Second Street, from Mission Street, and from certain freeway locations would be altered with the project; however, the project would not substantially change existing views from public open space, such as the plaza in front of the Transbay Terminal or Yerba Buena Gardens. Long-range views of the project, such as those from Twin Peaks or Potrero Hill, would be part of overall views of Downtown and would be limited by existing high-rise buildings.

The EIR will identify key street-level view points, including views of the project from Mission Street.

The project would comply with City Planning Commission Resolution 9212, which prohibits the use of mirrored or reflective glass. Therefore, mirrored glass would not be used, and the building would not result in glare affecting other properties.

The EIR will, therefore, not discuss glare. The EIR will discuss the project's design, appearance, possible effects on views and its relation to the scale of surrounding development.

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
3. <u>Population</u> - Would the project:			
a. Induce substantial growth or concentration of population?	—	<u>X</u>	<u>X</u>
b. Displace a large number of people (involving either housing or employment)?	—	<u>X</u>	<u>X</u>
c. Create a substantial demand for additional housing in San Francisco, or substantially reduce the housing supply?	—	<u>X</u>	<u>X</u>

The proposed project would demolish a total of 107,529 square feet of existing office, retail, and other commercial space. The project would not construct housing nor would it displace existing housing. Demolition of existing buildings on site would displace approximately eight existing businesses and about 87 employees. Space at the site is not now fully used.¹ The largest displaced business would be Patrick & Co., an office and print supply business at 561 Mission Street. These businesses and employees would be expected to relocate within San Francisco or elsewhere in the Bay Area. Patrick & Co. has stated that they will remain in San Francisco.²

The proposed project would be expected to add approximately 2,050 employees to San Francisco's economy for a net increase of 1,963 employees after adjusting for existing employment³ (an increase of 0.4% over the City's 535,000 existing employees).⁴ This increase in employment would be about 0.3% of total employment projected for San Francisco in year 2015 (673,500 employees), and it would be about 1.4% of projected employment growth from 1995-2015 (138,500 jobs).⁵ This potential increase in employment would be small in the context of total employment in San Francisco.

Increases in a city's employment in turn increase demand for local housing. San Francisco is the central city (and most urban place) in an attractive region. The San Francisco Bay Area is known for its agreeable climate, open space, recreational opportunities, cultural amenities, a strong and diverse economy, and prominent educational institutions. As a regional employment center, San Francisco attracts people who want to live close to where they work. These factors continue to support a strong demand for housing in San Francisco. Providing new housing to meet this strong demand is particularly difficult because the amount of land available is limited and because land and development costs are relatively high. For these reasons, San Francisco consistently ranks as one of the most expensive housing markets in the United States.

The proposed project would not create a substantial demand for new housing. Using the City's proposed Jobs-Housing Linkage Program (formerly the Office Affordable Housing Production Program) methodology, the project would create a demand for housing about 647 net new San Francisco households.⁶ These households would increase total San Francisco households in 1995 (311,430 households) less than one-half percent (0.3%).⁷ They would be less than one-half percent (0.20%) of total households forecast for year 2015 (343,750 households) and they would be 2.1% of the household growth forecast between 1995 and 2015 (32,320 households).⁸ Project-related housing demand would be less than these levels if a greater-than-usual percentage of the proposed project's new employees were already employed elsewhere and were residents of San Francisco.

Housing demand from a single development project, in and of itself, is not a physical environmental effect under CEQA. However, under requirements of Section 313 of the San Francisco Planning Code, the project sponsor would be required to contribute to affordable housing production in San Francisco, either by directly constructing housing or by paying an in-lieu fee of approximately \$3.970 million.⁹

Based on the above analysis, no significant physical environmental effects on housing demand or population would occur, and these issues require no further analysis in the EIR. However,

for informational purposes the EIR's land use section will discuss business displacement associated with the proposed project.

NOTES: Population

1. Employee displacement estimate based on total square footage of existing occupied space and on average office employee density factors of 275 sq. ft. per employee (conservative capacity estimate assuming 0% vacancy) and 350 sq. ft. per employee for retail and 590 sq. ft. per employee for other commercial (warehouse) space. Sources: City and County of San Francisco Planning Department and the San Francisco Redevelopment Agency, *Mission Bay Subsequent EIR*, SCH No. 97092068, Volume III, p. C.4, Table C.6, Density Factors and Assumptions for Estimating Employment for the Proposed Project (from Final Mission Bay EIR, 1990, Volume III, Appendices, p. XIV.A.10, Table XIV.A.2, Density Factors and Assumptions for Estimating Project Area Employment). Also consistent with Keyser Marston Associates, Inc., *San Francisco Cumulative Growth Scenario, Final Technical Memorandum*, prepared for the San Francisco Redevelopment Agency, August 27, 1997, revised March 30, 1998, see p. 40, Table 6, South of Market Employment Projection, Cumulative Growth Analysis, City of San Francisco 1995-2015.
2. David Messing, Tishman Speyer Properties, personal communication, March 17, 2000, to EIP Associates.
3. Employee estimate for the proposed project's 557,095 gsf of new office space and 8,000 gsf of retail based on average employee density factors of 275 sq. ft. per office employee (conservative capacity estimate assuming 0% vacancy) and 350 sq. ft. per employee for retail space. Sources: City and County of San Francisco Planning Department and the San Francisco Redevelopment Agency, *Mission Bay Subsequent EIR*, SCH No. 97092068, Volume III, p. C.4, Table C.6, Density Factors and Assumptions for Estimating Employment for the Proposed Project (from Final Mission Bay EIR, 1990, Volume III, Appendices, p. XIV.A.10, Table XIV.A.2, Density Factors and Assumptions for Estimating Project Area Employment).
4. City and County of San Francisco Planning Department and the San Francisco Redevelopment Agency, *Mission Bay Subsequent EIR*, SCH No. 97092068, Volume I, p. V.C.38, Table V.C.8, Mission Bay Project Area and Rest of City Employment 1995 and 2015. Mission Bay Project Area employment estimates prepared added to "Rest of City" estimates prepared by Keyser Marston Associates, Inc., *San Francisco Cumulative Growth Scenario, Final Technical Memorandum*, prepared for the San Francisco Redevelopment Agency, August 27, 1998, revised March 30, 1998.
5. City and County of San Francisco Planning Department and the San Francisco Redevelopment Agency, *Mission Bay Subsequent EIR*, SCH No. 97092068, Volume I, p. V.C.38, Table V.C.8, Mission Bay Project Area and Rest of City Employment 1995 and 2015. Mission Bay Project Area employment estimates prepared added to "Rest of City" estimates prepared by Keyser Marston Associates, Inc., *San Francisco Cumulative Growth Scenario, Final Technical Memorandum*, prepared for the San Francisco Redevelopment Agency, August 27, 1998, revised March 30, 1998.
6. Total project employment at buildout minus existing employment capacity on site. The methodology of the Office Affordable Housing Production Program Ordinance (City and County of San Francisco Planning Code, Section 313) applies only to office development. However, the methodology is used in this Initial Study (as it has in other recent environmental assessments such as the Mission Bay SEIR) to approximately estimate total demand for housing associated with total project employment for informational purposes. Households associated only with office employment are also stated in this Initial Study. To more accurately estimate housing demand for today's socioeconomic conditions, the

proposed updated assumptions include 55% of new employees will live in the City in households with an average of 1.6 workers per household (City and County of San Francisco Planning Department and the San Francisco Redevelopment Agency, *Mission Bay Subsequent EIR*, SCH No. 97092068, September 1998, Volume IV, Appendix C, p. C.8, Table C.8, Jobs/Housing Analysis for the Proposed Project).

7. City and County of San Francisco Planning Department and the San Francisco Redevelopment Agency, *Mission Bay Subsequent EIR*, SCH No. 97092068, Volume I, p. V.C.39, Table V.C.9, Mission Bay Project Area and Rest of City Households, Population, and Employed Residents, 1995 and 2015. Mission Bay Project Area estimates added to "Rest of City" estimates prepared by Keyser Marston Associates, Inc., *San Francisco Cumulative Growth Scenario, Final Technical Memorandum*, prepared for the San Francisco Redevelopment Agency, August 27, 1998, revised March 30, 1998.
8. City and County of San Francisco Planning Department and the San Francisco Redevelopment Agency, *Mission Bay Subsequent EIR*, SCH No. 97092068, Volume I, p. V.C.39, Table V.C.9, Mission Bay Project Area and Rest of City Households, Population, and Employed Residents, 1995 and 2015. Mission Bay Project Area estimates added to "Rest of City" estimates prepared by Keyser Marston Associates, Inc., *San Francisco Cumulative Growth Scenario, Final Technical Memorandum*, prepared for the San Francisco Redevelopment Agency, August 27, 1998, revised March 30, 1998.
9. David Messing, Tishman Speyer Properties, personal communication, March 17, 2000, to EIP Associates: Based net new gross square footage of office space. City and County of San Francisco Planning Code, Section 313 of the Office Affordable Housing Production Program Ordinance applies only to office development. Section 313 contains provisions and procedures for determining the exact gross square footage to which the in-lieu fee payment factor would be applied, as well as for increasing the fee to keep pace with inflation. The present fee is \$7.05 per square foot of office space. As such, the fee estimate in this Initial Study is approximate, with the Planning Department determining the precise fee at a subsequent in the project approval process. Section 313.6 describes the in-lieu fee payment calculation.

Yes No Discussed

4. Transportation/Circulation - Would the project:

- | | |
|--|-------------------------|
| a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system? | <u>To Be Determined</u> |
| b. Interfere with existing transportation systems, causing substantial alterations to circulation patterns or major traffic hazards? | <u>To Be Determined</u> |
| c. Cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity? | <u>To Be Determined</u> |

Yes No Discussed

- d. Cause a substantial increase in parking demand which cannot be accommodated by existing parking facilities?

To Be Determined

Increased employment at the project site would place increased demands on the local transportation system, including increased traffic, transit demand, and parking demand. The EIR will discuss project effects related to transportation and circulation, including intersection operations, transit demand, and impacts on pedestrian circulation, parking, bicycles, and freight loading, as well as construction impacts. The analysis will take into account the potential development occurring in the project vicinity.

Yes No Discussed

5. Noise - Would the project:

- a. Increase substantially the ambient noise levels for adjoining areas?
- b. Violate Title 24 Noise Insulation Standards, if applicable?
- c. Be substantially impacted by existing noise levels?

— X X

— X X

— X X

Outdoor noise in the vicinity of the project area includes numerous potential sources of noise. The most significant existing source of noise throughout most of San Francisco is traffic. Non-traffic noise sources in this area would include construction noise due to other projects in the vicinity such as the Interstate 80 freeway ramps and the Bay Bridge retrofit or construction of the approved 554 Mission Street office building directly north of the project, the recently approved 535 Mission Street building just to the east, or The Century residential tower under construction directly south of the project site. The nearest sensitive receptors to the project area would be isolated residential uses and Golden Gate University and Leadership High School directly across Mission Street from the project site.

Effects on Ambient Noise Levels

Construction Noise and Vibration. Construction activities from the project could potentially include pile driving, excavation and hauling, erection, and finishing. Construction activities would be temporary and intermittent and would occur at different times through the phases of project construction. During development, approximately three months would be devoted to demolition and site clearance, five months to foundation work, and sixteen months to erection and finishing. Demolition and pile driving would be most likely to cause temporary, substantial increases in noise and would be expected to occur for a duration of approximately two to three months.¹

Construction of other nearby projects that coincide with construction of the proposed development, such as the Interstate 80 freeway ramps and the Bay Bridge retrofit, 554 Mission Street, 535 Mission Street, or The Century residential tower project, would temporarily increase the overall noise levels in the immediate vicinity of construction activities, as the noise intensity would be greater with a larger number of noise sources.

While construction noise is generally considered a fact of urban life, and therefore not significant, noise impacts from construction activities can be reduced in at least three different ways: reduce the sound level at the source, provide the receiver with shielding, and alter the path of sound transmission.

Construction activities at all projects in the area, including the proposed development, would be conducted in compliance with the San Francisco Noise Ordinance (Article 29, San Francisco Police Code). The ordinance requires that noise levels from individual pieces of construction equipment other than impact tools not exceed 80 dBA at a distance of 100 feet from the source. Impact tools, such as jackhammers and impact wrenches, must have both intake and exhaust muffled to the satisfaction of the Director of Public Works. Section 2908 of the Noise Ordinance prohibits construction work between 8:00 p.m. and 7:00 a.m., if noise would exceed the ambient noise level by 5 dBA at the project property line, unless a special permit is authorized by the Director of Public Works. Project demolition and construction

would comply with the Noise Ordinance. Compliance with the Noise Ordinance is required by law and would reduce any impacts to a less-than-significant level.

To minimize noise and vibration from pile driving, the project sponsor would require project construction contractors to predrill holes to the maximum depth feasible on the basis of soil conditions. Contractors would be required to use construction equipment with state-of-the-art noise shielding and muffling devices. The project sponsor would also require that contractors limit pile driving activity to times of the day that would be consistent with the Noise Ordinance. See Mitigation Measures p.37.

Construction activities for the proposed project would generate ground-borne vibration with the environmental noise discussed above. Vibration impacts caused by construction activities vary depending on source, path, and receiver factors. Pile driving is potentially the greatest source of vibration generated from construction activities. Characteristics of the vibration path, or “path factors,” are the geologic and structural conditions that the vibration could travel through, including the soil type, depth to bedrock, and building type. The building type is also a vibration receiver factor. Vibration generally reduces as it propagates throughout a building, but resonances within the building structure may also amplify the vibration. In the absence of construction equipment type and operational details, site-specific soil vibration data, building design, and receptor location information, the impacts of construction-related vibration that would be caused by construction are difficult to quantify. To protect nearby structures from damage that could be caused by pile driving (or other construction activities) a measure would be included with the project to require monitoring of adjacent buildings for damages (see Mitigation Measure #3, p.37). Because the pile-driving activities would be temporary and intermittent, and the project sponsor would require contractors to schedule pile driving to minimize disturbance to neighbors (see Mitigation Measures p.37), it is reasonable to assume that potential vibration impacts would be reduced to a less-than-significant level.

Based on the above analysis, no further analysis of construction noise or vibration will be presented in the EIR.

Traffic Noise. Ambient noise levels in the vicinity of the project are typical of noise levels in urban San Francisco. The ambient noise is dominated by vehicular traffic, including trucks,

cars, buses, and emergency vehicles. Generally, traffic must double in volume to produce a noticeable increase in noise levels. Traffic volumes would not be expected to double as a result of the project; therefore, substantial increases in traffic noise levels would not be anticipated in the project area. Traffic noise will not be analyzed further in the EIR.

Building Equipment Noise. The proposed project would include mechanical equipment, such as air conditioning units and chillers, which could produce operational noise. These operations would be subject to the San Francisco Noise Ordinance, Article 29 of the San Francisco Police Code. Compliance with Article 29, Section 2909, would limit noise from building operations, and substantial increases in the ambient noise level due to building equipment noise would not be anticipated. Therefore, the EIR will not discuss building equipment noise further.

NOTES: Noise

1. David Messing, Tishman Speyer Properties, personal communication, March 17, 2000, to EIP Associates.

Yes No Discussed

6. Air Quality/Climate - Would the project:

- a. Violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation?

To Be Determined

- b. Expose sensitive receptors to substantial pollutant concentrations?

To Be Determined

- c. Permeate its vicinity with objectionable odors?

_____ X X

- d. Alter wind, moisture or temperature (including sun shading effects) so as to substantially affect public areas, or change the climate either in the community or region?

To Be Determined

Effects on Ambient Air Quality

Construction Emissions. During construction, air quality could potentially be affected for short periods. Excavation and movement of heavy equipment could create fugitive dust and emit criteria pollutants as a result of diesel fuel combustion. The criteria pollutants or precursors to criteria pollutants are nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO₂), hydrocarbons (HC), and particulate matter with a diameter of less than 10 microns (PM₁₀). Fugitive dust is made up of particulate matter including PM₁₀.

Construction emissions would occur in short-term and temporary phases, but they could still cause adverse effects on local air quality. The Bay Area Air Quality Management District (BAAQMD), in its CEQA Guidelines, has developed an analytical approach that obviates the need to estimate these emissions quantitatively. Instead, BAAQMD has identified a set of feasible PM₁₀ control measures for construction activities. The project includes these measures (see p.38) to reduce the effects of construction activities to an insignificant level. San Francisco Ordinance 175-91, adopted by the Board of Supervisors on May 6, 1991, requires that non-potable water be used for dust control activities. Because the project would include these mitigation measures, it would not cause significant construction-related air quality effects. Therefore, the EIR will not address these effects further.

Traffic Emissions. Potential air quality impacts from the proposed project could occur due to increased traffic throughout the region. Region-wide emissions will be assessed in the EIR and compared to the BAAQMD's significance thresholds for regional impacts. Also of concern are CO emissions and the possibility of exceeding CO standards at congested intersections and nearby sensitive receptors. The impact of vehicular CO emissions on local ambient air quality will be assessed in the EIR. CO concentrations will be estimated for existing, future-without-project, and future-with-project conditions. The results of the analysis will be compared to state and federal ambient air quality standards to evaluate impacts.

Exposure to Toxic Air Contaminant Emissions/Objectionable Odors

The proposed project includes new office space, new retail, and new parking areas. These uses could require operation of natural gas fired boilers or chillers that could emit trace quantities of toxic air contaminants, but they are not expected to have the potential to generate toxic air contaminants in substantial amounts or any objectionable odors. Therefore, the EIR will not discuss this issue further.

Wind Effects

To provide a comfortable wind environment for people in San Francisco, the City established specific comfort criteria to be used in the evaluation of proposed buildings in certain areas of the City. The City Planning Code sets forth wind criteria for the proposed project, which is in a C-3 District. Section 148(a) establishes comfort criteria of 11 miles per hour (mph) equivalent wind speed for pedestrians and 7 mph for seating areas, not to be exceeded more than 10% of the time, year-round, between 7:00 a.m. and 6:00 p.m. Winds that reach or exceed 26 mph for a single hour are defined in the Planning Code as hazardous. Developments that would cause wind conditions to exceed the hazardous wind criterion for more than a single hour per year are also restricted in C-3 Districts. The EIR will analyze the project's effects in regard to existing wind conditions. A wind tunnel test will be performed and the effects of the project and the alternatives will be compared to the applicable criteria.

Shadow Effects

City Planning Code Section 295 restricts new shadow upon public spaces under the jurisdiction of the Recreation and Park Department by any structure exceeding 40 feet unless the City Planning Commission, in consultation with the Recreation and Park Commission, finds the impact to be insignificant. In the project vicinity, Union Square, to the northeast, and St. Mary's Square, to the north, would be subject to Section 295. Hallidie Plaza at Market and Powell Streets northeast of the site under Department of Public Works authority, and Yerba Buena Gardens, about three blocks east of the site, under San Francisco Redevelopment Authority jurisdiction, are not subject to Section 295. A shadow study will be completed and the EIR will discuss its results.¹

NOTES: Air Quality/Climate

1. The preliminary shadow analysis documenting Section 295 information is on file and available for public review at the Planning Department, 1660 Mission Street.

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
7. <u>Utilities/Public Services</u> - Would the project:			
a. Breach published national, state or local standards relating to solid waste or litter control?	___	<u>X</u>	<u>X</u>
b. Extend a sewer trunk line with capacity to serve new development?	___	<u>X</u>	<u>X</u>
c. Substantially increase demand for schools, recreation or other public facilities?	___	<u>X</u>	<u>X</u>
d. Require major expansion of power, water, or communications facilities?	___	<u>X</u>	<u>X</u>

The proposed project would incrementally increase demand for and use of public services and utilities on the site and increase water consumption, but not in excess of amounts expected and provided for in the project area, and would not be expected to have any measurable impact on public services or utilities. The new building would be designed to incorporate water-conserving measures, such as installing low-flush toilets and urinals, as required by California State Building Code Section 402.0(c). The project would be undertaken in a fully built-out area of downtown San Francisco, where all utilities and services are currently provided for; no need for any expansion of public utilities or public service facilities is anticipated. Therefore, effects would not be significant, and this topic requires no further analysis and will not be included in the EIR.

Yes No Discussed

8. Biology - Would the project:

- | | | | |
|---|-----|----------|----------|
| a. Substantially affect a rare or endangered species of animal or plant, or the habitat of the species? | ___ | <u>X</u> | <u>X</u> |
| b. Substantially diminish habitat for fish, wildlife or plants, or interfere substantially with the movement of any resident or migratory fish or wildlife species? | ___ | <u>X</u> | <u>X</u> |
| c. Require removal of substantial numbers of mature, scenic trees? | ___ | <u>X</u> | <u>X</u> |

No known rare, threatened or endangered species are known to exist in the vicinity. The proposed project site is in a developed urban area and is completely covered by structures and impervious surfaces. Development of the site would not affect, or substantially diminish, plant or animal habitats. The project would not interfere with any resident or migratory species. The open space proposed as part of the project would include plants and street trees appropriate for the urban landscape of the project site. Therefore, this topic will not be discussed in the EIR.

Yes No Discussed

9. Geology/Topography - Would the project:

- | | | | |
|--|-----|----------|----------|
| a. Expose people or structures to major geologic hazards (slides, subsidence, erosion and liquefaction)? | ___ | <u>X</u> | <u>X</u> |
| b. Change substantially the topography or any unique geologic or physical features of the site? | ___ | <u>X</u> | <u>X</u> |

Geologic Hazards

The Community Safety Element of the *San Francisco General Plan* contains maps that show areas subject to geologic hazards. The project site is located in an area that would be subject to “non-structural to moderate” damage (Modified Mercalli Intensity VII to VIII) from seismic

groundshaking originated by a characteristic earthquake (Moment Magnitude 7.1) along the San Andreas fault, approximately 6 miles southwest of San Francisco, and Northern Hayward fault, approximately 12 miles northeast of San Francisco (Maps 2 and 3 in the Community Safety Element). The project site also is in an area of liquefaction potential (Map 4 in the Community Safety Element), a Seismic Hazards Study Zone designated by the California Division of Mines and Geology. The project site is not in an area subject to landslide, seiche or tsunami run-up, or reservoir inundation hazards (Maps 5, 6 and 7 in the Community Safety Element).¹ The project site is not located in an Alquist-Priolo Earthquake Fault Zone.²

In its review of the building permit application for a development proposal in an area of liquefaction potential, the Department of Building Inspection would require the project sponsor to prepare geotechnical reports to assess the nature and severity of the hazards at the site and to recommend project design and construction features that would reduce those hazards. One or more geotechnical (foundation) investigations for each of the four major phases of the project by a California-licensed geotechnical engineer would be included as part of the project. The project sponsor and its contractors would follow the recommendations of the final geotechnical reports regarding any excavation and construction for the project, including the types of foundation necessary to support various project elements. To ensure compliance with all current San Francisco Building Code provisions regarding structural safety, the Department of Building Inspection would review the geotechnical report and building plans for the proposed project, and determine the necessary engineering and design features to reduce potential damage to structures caused by groundshaking and liquefaction. In this way, amelioration of potential damage to structures from geologic hazards at the project site would be ensured through the Department of Building Inspection requirement for a geotechnical report and review of the building permit application.

The project site is eight feet above San Francisco Datum.³ The ground surface in the project area slopes down to the northeast toward San Francisco Bay, and the project site currently is covered by two- to four-story brick and concrete buildings (some with and some without basements). Phase I Environmental Site Assessments completed in 1999 by Treadwell & Rollo⁴ for various structures on the project site indicate the site is underlain by unengineered

fill material (sand, brick, rubble, etc.), most likely from the 1906 earthquake and fire. Thickness of this fill ranges from 10 feet to 12 feet, depending on the location sampled. Beneath the fill is medium stiff to stiff clay or dune sand to a depth of at least 7.5 feet below the ground surface. Near-surface groundwater is locally found at depths of approximately 12 to 14 feet below the existing ground surface.

Because of the composition of the subsurface material at the site, it is probable that the proposed project would need pile foundations. Pile driving is also discussed in this Initial Study as a noise issue (see p.18). A measure to reduce the noise of pile driving is presented on p.37. Because of the shallow nature of the water table, it is likely that at least some of the excavations for the proposed structures would need dewatering. The 555 Mission Street project includes mitigation measures (see p.38) to reduce the potential settlement effects of dewatering on nearby streets and properties.

The proposed project would not alter the topography of the site, or otherwise affect any unique geologic or physical features of the site. Based on the above discussion, no further analysis of geology and seismicity or topography is required in the EIR.

NOTES: Geology/Topography

1. City and County of San Francisco, *Community Safety Element, San Francisco General Plan*, April 1997.
2. California Division of Mines and Geology, *Fault-Rupture Hazard Zones in California, Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zones Maps*, Special Publication 42, revised 1997, Figure 4B.
3. Peter J. Bekey, KCA Engineers, Inc., personal communication, March 9, 2000, to EIP Associates.
4. Treadwell & Rollo, Inc., *Phase I Environmental Site Assessment, 551 Through 573 Mission Street, San Francisco, California*, August 30, 1999.

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
10. <u>Water</u> - Would the project:			
a. Substantially degrade water quality, or contaminate a public water supply?	___	<u>X</u>	<u>X</u>
b. Substantially degrade or deplete ground water resources, or interfere substantially with ground water recharge?	___	<u>X</u>	<u>X</u>
c. Cause substantial flooding, erosion or siltation?	___	<u>X</u>	<u>X</u>

Water Quality

The project would not substantially degrade water quality or contaminate a public water supply. All sanitary wastewater from the proposed buildings and stormwater runoff from the project site would be collected and treated at the Southeast Water Pollution Control Plant prior to discharge to San Francisco Bay. Treatment would be provided pursuant to the effluent discharge limitations set by the plant's National Pollutant Discharge Elimination System (NPDES) permit. See "Flooding, Erosion, and Siltation" below for a discussion of water quality during construction.

Groundwater Resources

The project would include excavation to a depth of about 24 feet in order to accommodate two levels of proposed underground parking. Dewatering could be required. Any groundwater encountered during construction would be subject to the San Francisco Industrial Waste Ordinance (Ordinance No. 199-77), which requires that groundwater meet specified standards before being discharged into the sewer system. The Bureau of Environmental Regulation and Management of the San Francisco Public Utilities Commission would be notified if the project were to require dewatering.

Should dewatering be necessary, the final foundation study for the project would address the potential settlement and subsidence impacts of this dewatering. Based upon this discussion,

the foundation study would contain a determination as to whether or not a lateral movement and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey is recommended, the Department of Building Inspection would require that a Special Inspector (as defined in Article 3 of the San Francisco Building Code) be retained by the project sponsor to perform this monitoring. Groundwater monitoring wells and/or instruments would be used to monitor potential settlement and subsidence. If, in the judgment of the Special Inspector, unacceptable movement were to occur during construction, groundwater recharge would be used to halt this settlement. The project sponsor would delay construction if necessary. Costs for the survey and any necessary repairs to service lines under the street would be borne by the project sponsor. The project would include mitigation measures to reduce the potential water quality effects of dewatering (see pp.38-39).

Flooding, Erosion, and Siltation

The project site is almost entirely paved or covered by structures; therefore, the project would not substantially affect the area of impervious surface at the site or alter site drainage. Project-related wastewater and storm water would continue to flow to the combined sewer system. During construction, requirements to reduce erosion would be implemented pursuant to California Building Code Chapter 33, Excavation and Grading. During operations, the project would comply with all local wastewater discharge requirements. The project would include a mitigation measure to reduce the potential water quality effect of sedimentation (see p. 38-39). based on the above discussion, the EIR will not include further analysis of hydrology and water quality issues.

Yes No Discussed

11. Energy/Natural Resources - Would the project:

- a. Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?

_____ X X

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
b. Have a substantial effect on the potential use, extraction, or depletion of a natural resource?	___	<u>X</u>	<u>X</u>

The project would meet current state and local codes concerning energy consumption, including Title 24 of the California Code of Regulations. For this reason, it would not cause a wasteful use of energy. Therefore, energy consumption requires no further analysis; the effect would not be significant, and this issue will not be discussed in the EIR.

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
12. <u>Hazards</u> - Would the project:			
a. Create a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected?	___	<u>X</u>	<u>X</u>
b. Interfere with emergency response plans or emergency evacuation plans?	___	<u>X</u>	<u>X</u>
c. Create a potentially substantial fire hazard?	___	<u>X</u>	<u>X</u>

Public Health Hazards and Hazardous Materials

Hazardous Materials Use. Regarding the potential for public health hazards, the project would involve the development of offices and supporting uses that would require relatively small quantities of hazardous materials for routine business purposes. The development would likely handle common types of hazardous materials, such as paints, cleaners, toners, and solvents. These commercial products are labeled to inform users of potential risks and to instruct them in appropriate handling procedures. Most of these materials are consumed through use, resulting in relatively little waste. Businesses are required by law to ensure employee safety by identifying hazardous materials in the workplace, providing safety information to workers that handle hazardous materials, and adequately training workers. For

these reasons, hazardous materials use in offices and supporting businesses are not typically considered to pose any substantial public health or safety hazards related to hazardous materials.

The greatest volume of hazardous material expected at the project site would be fuel stored in above-ground storage tanks to power emergency generators. The San Francisco Department of Public Health would oversee the design, installation, and operation of these fuel storage tanks. Regulations require provisions to contain possible spills. The Bay Area Air Quality Management District would oversee potential air emissions from testing the emergency generators. As a result of this regulatory oversight and required leak prevention and control measures, the presence of fuel on site for emergency purposes would not be considered to pose any substantial public health or safety hazards.

Soil and Groundwater. Historical activities at the project site and in its vicinity may have resulted in the release of contaminants into soil and groundwater. A Phase I Environmental Site Assessment has been prepared for the properties that comprise the site.¹ The Phase I investigation lists current and past operations, reviews environmental agency databases and records, reports site reconnaissance observations, and summarizes potential contamination issues that warrant further investigation. The project site does not appear on the *State of California Hazardous Waste and Substances Sites List*, but a nearby property (150 First Street) appears on the list as a result of underground storage tanks that have leaked petroleum hydrocarbons and volatile organic compounds into soil and groundwater.² These leaks do not appear to have affected conditions at the project site.³ In the early 1900s, much of the project area was filled with debris from the 1906 San Francisco Earthquake and the fire that followed. Fill material from this period often contains elevated levels of various metals such as lead (some of which may be toxic) and petroleum hydrocarbons. These substances may be in soil in the area.⁴ Analysis of slag deposited in the basement of 561-563 Mission Street found lead in concentrations not considered to be hazardous.⁵

Project plans call for the excavation and removal of about 31,750 cubic yards of soil from the project site. If contaminated areas at the project site were to be excavated, contaminated soil

or groundwater could be encountered. Construction-related dewatering could also result in the migration of contaminants to the project site. Without appropriate safeguards, earth-moving activities could potentially expose workers and possibly the public to chemical compounds in soils, soil gases (gases or vapors, mostly air, trapped within soil), or groundwater. Exposure would most likely occur through skin contact or inhalation. Workers directly engaged in on-site activities would face the greatest potential for exposure to contaminants. The public could also be exposed if access to the construction site were insufficiently controlled. Hazardous materials exposure could cause various short-term or long-term health effects specific to each chemical present at the site if present in sufficient concentration and duration.

The project site is not within the Maher Ordinance boundary area (Article 20 of the *San Francisco Public Works Code*). However, soil and groundwater contaminants would need to be characterized to ensure that appropriate plans are implemented for soil and groundwater handling. Any contaminated soil and groundwater disturbed at the site would need to be managed appropriately, and residual risks to future occupants of the site would need to be kept within acceptable levels as determined by the San Francisco Department of Public Health and other appropriate oversight agencies. Unless soil and groundwater management plans are adequately prepared and implemented, the project could pose a significant impact by potentially creating a substantial human health hazard or involving the disposal of materials in a manner that poses substantial hazards.

The project includes a mitigation measure to characterize soil and groundwater conditions by preparing a limited Phase II Environmental Site Assessment. If the Phase II report concluded that existing soil and groundwater conditions would pose significant human health or safety hazards, a Site Safety and Health Plan would need to be prepared pursuant to California Division of Occupational Safety and Health (Cal-OSHA) requirements and National Institute for Occupational Safety and Health guidance to ensure worker safety.⁶ Under Cal-OSHA requirements, the Site Safety and Health Plan would need to be prepared prior to initiating any earth-moving activities at the site. The plan would contain policies and procedures to protect site workers from potential health and safety impacts related to contaminated soil and groundwater. The plan would apply to all site activities through the completion of earthwork

construction. It would include specific training requirements and personal protection equipment for on-site workers. With regard to public safety and health, the Site Safety and Health Plan is not required to include measures to minimize the potential for public exposure. A mitigation measure is included to minimize potential public exposure. (pp.39-40)

Building Materials. Existing buildings at the project site could contain hazardous materials, such as asbestos, polychlorinated biphenyls, lead, mercury, or other hazardous materials. In the past, asbestos, polychlorinated biphenyls, and lead were commonly installed in insulation, floor tiles, roofing tar, electrical transformers, fluorescent light ballasts, and paint. Mercury is common in electrical switches and fluorescent light bulbs. If such hazardous materials exist in buildings to be demolished, they could pose hazards to workers, neighbors, or the natural environment. However, the project includes a mitigation measure (pp.39-40) intended to reduce to the potential health risks associated with building materials containing asbestos, polychlorinated biphenyls, lead, mercury, or other hazardous materials by securing the investigation, removal, and disposal of these materials prior to demolition of the buildings.

The measure would ensure compliance with existing regulations applicable to the management of any potentially hazardous building components. For example, the BAAQMD regulates airborne asbestos and is to be notified ten days in advance of any proposed demolition. It randomly inspects asbestos removal operations. The California Division of Occupational Safety and Health is also to be notified of asbestos abatement operations. It oversees requirements placed on asbestos abatement contractors whenever asbestos-related work involves 100 sq. ft. or more of asbestos-containing material. Because buildings constructed prior to 1979 are assumed to contain lead-based paint, demolition activities involving lead-based paint are to comply with Chapter 36 of the *San Francisco Building Code*. The ordinance requires that containment barriers be at least as protective of human health and the environment as those in the most recent *Guidelines for Evaluation and Control of Lead-Based Paint Hazards* promulgated by the U.S. Department of Housing and Urban Development.⁷ Polychlorinated biphenyls are regulated under the federal Toxic Substances Control Act of

1976, and mercury is regulated as a hazardous waste. These existing laws and regulations would help to ensure the health and safety of workers, neighbors, and the natural environment.

Emergency Response Plans

Occupants of the proposed building would contribute to congestion if an emergency evacuation of the area were required. Section 12.202(e)(1) of the San Francisco Fire Code requires that all owners of high-rise buildings (over 75 feet) “shall establish or cause to be established procedures to be followed in case of fire or other emergencies. All such procedures shall be reviewed and approved by the chief of division.” Additionally, project construction would have to conform to the provisions of the Building and Fire Codes which require additional life-safety protections for high-rise buildings.

Fire Hazards

San Francisco ensures fire safety primarily through provisions of the Building Code and Fire Code. The proposed project would conform to these standards, which (depending on building type) may also include development of an emergency procedure manual and an exit drill plan. In this way, potential fire hazards (including those associated with hydrant water pressure and emergency access) would be mitigated during the permit review process.

Potential health and safety issues related to potentially contaminated building components, contaminated soil and groundwater, and future use of hazardous materials on site would be reduced to less-than-significant levels, with implementation of the mitigation measures identified on pp. 39-40 that are included in project development. Potential impacts related to emergency response plans and fire hazards would also be less than significant. Therefore, these issues do not require further analysis and will not be discussed in the EIR.

NOTES: Hazards

1. Treadwell & Rollo, Inc., *Phase I Environmental Site Assessment, 551 Through 573 Mission Street, San Francisco, California*, August 30, 1999.
2. California Department of Toxic Substances Control, *State of California Hazardous Waste and Substances Site List*, April 1998, pp. 240-245.

3. Treadwell & Rollo, Inc., *Phase I Environmental Site Assessment, 551 Through 573 Mission Street, San Francisco, California*, August 30, 1999, p. 14.
 4. Treadwell & Rollo, Inc., *Phase I Environmental Site Assessment, 551 Through 573 Mission Street, San Francisco, California*, August 30, 1999, p. 14
 5. Treadwell & Rollo, Inc., *Phase I Environmental Site Assessment, 551 Through 573 Mission Street, San Francisco, California*, August 30, 1999, p. 13
 6. California Code of Regulations, Title 8, Section 5192, "Hazardous Waste Operations and Emergency Response."
- National Institute for Occupational Safety and Health, U.S. Occupational Safety and Health Administration, U.S. Coast Guard, and U.S. Environmental Protection Agency, *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*, U.S. Department of Health and Human Services Publication No. 85-115, October 1985.
7. U.S. Department of Housing and Urban Development, *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*, June 1995 (Chapter 7 revised 1997).

Yes No Discussed

13. Cultural - Would the project:

- | | |
|---|--|
| a. Disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group; or a paleontological site except as a part of a scientific study? | <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div>—</div> <div><u>X</u></div> <div><u>X</u></div> </div> |
| b. Conflict with established recreational, educational, religious or scientific uses of the area? | <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div>—</div> <div><u>X</u></div> <div>—</div> </div> |
| c. Conflict with the preservation of buildings subject to the provisions of Article 10 or Article 11 of the City Planning Code? | <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div colspan="3"><u>To Be Determined</u></div> </div> |

Archaeological Resources

Archeo-Tec Consulting Archaeologists has completed archival cultural resources evaluations in the project vicinity for potential subsurface historic or pre-historic resources and documented the history of the area for previous projects in the vicinity.¹ Potential for the existence of subsurface cultural resources of the prehistoric/protohistoric period (c. 4000 B.C. - A.D.

1775), Spanish/Mexican and Early American era (1776-1848), and the Gold Rush and Later 19th Century eras (1849-c. 1906) were systematically examined.

The project vicinity existed in a natural state as sand hills adjacent to or partially submerged by the original western shoreline of the San Francisco Bay, until landfill and grading of the area in the late 1850s. The Gold Rush-era community of Happy Valley was bordered to the south by 555 Mission Street. Happy Valley was originally a tent city on the outskirts of the city of Yerba Buena, now known as San Francisco. By the late 1850s, the project area had been greatly changed. The project vicinity had been graded and paved to give rise to industrial uses in the area. Industrial facilities at or adjacent to the project site included the San Francisco Gas Works (predecessor to Pacific Gas & Electric Company), Union Ironworks, the Vulcan Foundry, the Eagle Iron Works, and the Pacific Iron Foundry. South of Market industrial facilities such as these were central to the City's economic prosperity in the second half of the 19th century. A local landmark, the Selby Shot Tower, a 200-foot-tall tower named for Thomas Selby (mayor of San Francisco from 1869 to 1871), stood in the project vicinity at the southeast corner of First Street and Howard Street from 1864 to 1904. The Earthquake and Fire of 1906 consumed the South of Market area, including the project vicinity. After 1906, the project vicinity and its immediate surroundings began to assume the essential architectural and demographic contours that have characterized the region throughout the remainder of the 20th century. The project vicinity is now characterized by warehouse, office, and retail uses; buildings in or adjacent to the project vicinity represent a variety of 20th century architectural styles, including early 20th century industrial, Art Deco, eclectic revival styles, and modern commercial.

While there is no record of significant resources of the prehistoric period, the area "should be considered as a zone of potential sensitivity with respect to the possible existence of significant prehistoric/protohistoric subsurface cultural resources."² A significant prehistoric archaeological deposit, previously unrecorded, was recovered in 1986 about one block north of the project vicinity, at the southwest corner of Stevenson and Ecker Streets. This discovery was made at a site with a similar natural environmental setting as the proposed project site.

Two additional previously unrecorded prehistoric sites have been encountered within a one-half mile radius of the proposed project vicinity.

Prior to the Gold Rush era, there is no historical record of settlement or occupation in the project vicinity and records indicate that the area remained in its natural state, as noted above. As a result, historic cultural resources from the Spanish/Mexican and Early American era (1776-1848) would not likely be encountered in the project vicinity.

There is no record of subsurface cultural resources from the Gold Rush period found at the project site. However, as the borders of Happy Valley were nearby at approximately the intersection of First and Howard Streets, the project site may be a sensitive area for remains from the Gold Rush era, encountered as deeply buried deposits. Such remains have been uncovered near the project site, near the northwest corner of First Street and Minna Street. Historical sources do not indicate past or recent evidence of Gold Rush-era ship hulks or related maritime cultural resources in the project vicinity.

As the project site and vicinity were consumed by the earthquake and fire of 1906, potential for the discovery of archaeological remains of the Late 19th Century era is low but cannot be entirely discounted.

The proposed project may include excavating the project site to a depth of 24 feet to accommodate foundations and subsurface parking facilities. Based upon archival evidence, the proposed project may disrupt or adversely affect prehistoric resources or historic archaeological resources from the Gold Rush era. The project includes a mitigation measure (see pp. 40-41) that is intended to reduce the potential impact to cultural resources to a less-than-significant level. Archaeological resources will not be discussed further in the EIR.

Historic Architectural Resources

All of the six buildings on the site are older structures that have been modified over time. None of the buildings have been listed or determined eligible for listing in the National

Register of Historic Places or the California Register of Historic Resources, and none are locally designated as significant. All the buildings on the project site were evaluated as part of the Downtown Plan and were excluded from the New Montgomery-Second Street conservation district, which is in proximity to the site.

Of the six buildings on site, four are rated "C" by San Francisco Heritage (Heritage) for contextual importance and two are rated "D" for minor or no importance. 545 Mission Street, directly east of the project site, has been rated "C". Heritage has conducted a number of surveys, the first of which was published in 1978 as *Splendid Survivors*, covering the Downtown Area. 571 Mission Street is rated 1 in the Department of City Planning's 1976 architectural survey (0-low to 5-high). While the City has used information in these surveys to inform design and planning decisions, the ratings are not formal designations of historic resources. Therefore, this topic will not be discussed further in the EIR.

NOTES: Cultural

1. Archeo-Tec, *Archival Cultural Resources Evaluation of the Proposed First and Howard Development Project*, City and County of San Francisco, California, January 1999.
2. Archeo-Tec, *Archival Cultural Resources Evaluation of the Proposed First and Howard Development Project*, City and County of San Francisco, California, January 1999.

Yes No Discussed

C. OTHER

Require approval of permits from
City Departments other than Department
of City Planning or Bureau of
Building Inspection or from Regional,
State or Federal Agencies?

X

The proposed project would require review by the Planning Commission under Planning Code Sections 309 and 321, as well as a Conditional Use authorization from the Commission. Building permits would be reviewed and approved by the Planning Department and the Department of Building Inspection, and permits would be required from the Department of Public Works (DPW) for temporary use of the sidewalk during construction and for new sidewalks and driveways. DPW would also review an application for lot mergers. No approval would be required from regional, state or federal agencies.

Yes No N/A Discussed

D. MITIGATION MEASURES

1. Could the project have significant effects if mitigation measures are not included in the project?

X X

2. Are all mitigation measures necessary to eliminate significant effects included in the project?

X X

Noise

1. If pile driving is necessary to install pile foundations, the project sponsor would require construction contractors to predrill holes to the maximum depth feasible on the basis of soil conditions. Contractors would be required to use construction equipment with state-of-the-art noise shielding and muffling devices. The project sponsor would also require that contractors schedule pile-driving activity for times of the day that would be consistent with Section 2908 of the San Francisco Police Code.

Air Quality/Climate

2. The project sponsor would require its contractors to implement as appropriate the BAAQMD's guidelines on basic control measures for emissions of dust during construction: (1) water all active construction areas at least twice daily; (2) cover all trucks hauling soil, sand, and other loose materials or require trucks to maintain at least two feet of freeboard; (3) pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas; (4) sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas; (5) sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.

Geology/Topography

3. The project sponsor would ensure that the construction contractor conducts a pre-construction survey of existing conditions and monitors any adjacent buildings for damage during construction, if recommended by the geotechnical engineer, in the foundation investigations.
4. If dewatering were necessary, the final foundation report would address the potential settlement and subsidence impacts of this dewatering. Based on this discussion, the foundation report would determine whether or not a lateral movement and settlement survey would be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey were recommended, the Department of Building Inspection would require that a Special Inspector (as defined in Article 3 of the San Francisco Building Code) be retained by the project sponsor to perform this monitoring. Instruments would be used to monitor potential settlement and subsidence. If, in the judgment of the Special Inspector, unacceptable movement were to occur during construction, groundwater recharge would be used to halt this settlement. The project sponsor would delay construction if necessary. Costs for the survey and any necessary repairs to service lines under the street would be borne by the project sponsor.

If dewatering were necessary, the project sponsor and its contractor would follow the geotechnical engineers' recommendations regarding dewatering to avoid settlement of adjacent streets, utilities, and buildings that could potentially occur as a result of dewatering.

5. The project sponsor and its contractor would follow the geotechnical engineers' recommendations regarding installation of settlement markers around the perimeter of shoring to monitor any ground movements outside of the shoring itself. Shoring systems would be modified as necessary in the event that substantial movements are detected.

Water Quality

The project sponsor would ensure that groundwater from site dewatering and stormwater runoff meets the discharge limitations of the City's Industrial Waste Ordinance by carrying out the following:

6. If dewatering were necessary, the project sponsor would follow the recommendations of the geotechnical engineer or environmental remediation consultant, in consultation with the Bureau of Environmental Regulation and Management of the San Francisco Public Utilities Commission, regarding treatment, if any, of pumped groundwater prior to discharge to the combined sewer system.

If dewatering were necessary, groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this were found to be necessary by the Bureau of Environmental Regulation and Management of the San Francisco Public Utilities Commission to reduce the amount of sediment entering the combined sewer system.

7. The project sponsor would require the general contractor to install and maintain sediment traps in local storm water intakes during construction to reduce the amount of sediment entering the combined sewer system, if this were found to be necessary by the Bureau of Environmental Regulation and Management of the San Francisco Public Utilities Commission.

Hazards

8. In addition to local, state and federal requirements for handling soil and groundwater containing designated levels of chemicals, the project sponsor would enter into a voluntary remedial action agreement with the Department of Public Health pursuant to Health and Safety Code Section 101480 *et seq.* At a minimum, the project sponsor would undertake the following work and any additional requirements imposed by the Department of Public Health under the agreement. Potential remedial action, if appropriate, could involve such measures as natural attenuation, bioremediation, vapor extraction, or excavation and disposal.
 - a. A Phase II Environmental Site Assessment would be prepared for the project site. On the basis of historical uses and the conclusions of the Phase I Environmental Site Assessment, soil or groundwater samples, or both, would be collected throughout the project site as directed by the site assessment consultant. Sampling would extend at least to depths proposed for excavation. The samples would be analyzed to identify and quantify any contamination. These studies would be completed by a Registered Environmental Assessor (REA) or a similarly qualified individual prior to initiating any earth-moving activities at the site.

- If findings in the Phase II report result in the preparation of a Site Safety and Health Plan, in addition to measures that protect on-site workers, the Plan would include measures to minimize public exposure to contaminated soils. Such measures would include dust control, appropriate site security, restriction of public access, and posting of warning signs, and would apply from the time of surface disruption through the completion of earthwork construction.
- b. Prior to any demolition or excavation at the project site, surveys would be conducted to identify any potentially hazardous materials in existing buildings or building materials. At a minimum, these surveys would identify any asbestos, polychlorinated biphenyls, lead, mercury, or other hazardous materials that would require removal and disposal before demolition. These surveys would be completed by an REA or a similarly qualified individual.
 - c. All reports and plans prepared in accordance with Mitigation Measure No. 8 would be provided to the San Francisco Department of Public Health and any other agencies identified by the Department of Public Health. When all hazardous materials have been removed from existing buildings, and soil and groundwater analysis and other activities have been completed, as appropriate, the project sponsor would submit to the San Francisco Planning Department and the San Francisco Department of Public Health (and any other agencies identified by the Department of Public Health) a report stating that the mitigation measure has been implemented. The report would describe the steps taken to comply with the mitigation measure and include all verifying documentation. The report would be certified by an REA or a similarly qualified individual who states that all necessary mitigation measures have been implemented.

Archaeological Resources

- 9. Given the location and depth of excavation proposed, and the likelihood that archaeological resources would be encountered on the project site, the sponsor has agreed to retain the services of an archaeologist. The archaeologist would conduct a pre-excavation testing program to better determine the probability of finding cultural and historical remains. The testing program would use a series of mechanical, exploratory borings or trenches or other testing methods determined by the archaeologist to be appropriate.

If, after testing, the archaeologist determines that no further investigations or precautions are necessary to safeguard potentially significant archaeological resources, the archaeologist would submit a written report to the Environmental Review Officer, with a copy to the project sponsor. If the archaeologist determines that further investigations or precautions are necessary, he or she would consult with the Environmental Review Officer, and they would jointly determine what additional procedures are necessary to minimize potential effects on archaeological resources.

These additional measures would be implemented by the project sponsor and could include a program of on-site monitoring of all site excavation, during which the archaeologist would record observations in a permanent log. The monitoring program, whether or not there are findings of significance, would result in a written report to be submitted first and directly to the Environmental Review Officer, with a copy to the project sponsor. During the monitoring program, the project sponsor would designate one individual on site as its representative. This representative would have the authority to suspend work at the site to give the archaeologist time to investigate and evaluate archaeological resources if they are encountered.

If evidence of cultural resources of potential significance were found during the monitoring program, the archaeologist would immediately notify the Environmental Review Officer, and the project sponsor would halt any activities that the archaeologist and the Environmental Review Officer jointly determine could damage such cultural resources. Ground-disturbing activities that could damage cultural resources would be suspended for a total maximum of four weeks over the course of construction of each building.

After notifying the Environmental Review Officer, the archaeologist would prepare a written report to be submitted first and directly to the Environmental Review Officer, with a copy to the project sponsor, which would contain an assessment of the potential significance of the find and recommendations for what measure should be implemented to minimize potential effects on archaeological resources. Based on this report, the Environmental Review Officer would recommend specific additional measures to be implemented by the project sponsor. These additional measures could include a site security program, additional on-site investigations by the archaeologist, or documentation, preservation, and recovery of cultural material.

Finally, the archaeologist would prepare a report documenting the cultural resources that were discovered, an evaluation as to their significance, and a description as to how any archaeological testing, exploration or recovery program is to be conducted.

Copies of all draft reports prepared according to this mitigation measure would be sent first and directly to the Environmental Review Officer for review. Following approval by the Environmental Review Officer, copies of the final reports would be sent by the archaeologist directly to the President of the Landmarks Preservation Advisory Board and the California Archaeological Site Survey Northwest Information Center. Three copies of the final archaeology reports would be submitted to the Environmental Review Officer, accompanied by copies of the transmittals documenting its distribution.

E. ALTERNATIVES

The EIR will discuss and analyze several alternatives to the proposed project that would reduce or eliminate any significant environmental effects. At a minimum, these alternatives will include a No Project Alternative and an alternative that fully complies with bulk standards contained within the Planning Code and provide parking that would not exceed 7% of the total gross floor area of the development. This alternative would be a 38-story building about 500 feet tall and contain about 572,000 square feet of office space, about 9,500 square feet of ground-floor retail space, and about 42,300 square feet of parking space in two below-grade levels.

Yes No Discussed

F. MANDATORY FINDINGS OF SIGNIFICANCE

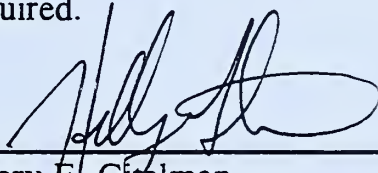
- | | | | | |
|----|---|-------------------------|----------|----------|
| 1. | Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or pre-history? | <u>X</u> | — | <u>X</u> |
| 2. | Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? | — | <u>X</u> | — |
| 3. | Does the project have possible environmental effects which are individually limited, but cumulatively considerable? (Analyze in the light of past projects, other current projects, and probable future projects.) | <u>To Be Determined</u> | | |
| 4. | Would the project cause substantial adverse effects on human beings, either directly or indirectly? | <u>To Be Determined</u> | | |

G. ON THE BASIS OF THIS INITIAL STUDY:

- ☐ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Department of City Planning.
- ☐ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures, numbers ___, in the discussion have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.
- ☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

5/6/00

Date



Hillary E. Girelman
Environmental Review Officer
for Gerald G. Green
Director of Planning

APPENDIX B. WIND

**WIND TUNNEL ANALYSIS FOR THE PROPOSED
555 MISSION STREET PROJECT, SAN FRANCISCO**

Prepared for:

EIP Associates
601 Montgomery Street, Suite 500
San Francisco, CA. 94111

April 2000

I. INTRODUCTION

The proposed project would be located mid-block within the block bounded by Second Street, Mission Street, Shaw Alley and Minna Street in the South of Market area of San Francisco. The project would construct a 30-story, 441-foot tall office tower, 8,000 square feet of ground-floor retail space and two levels of underground parking. A new pedestrian plaza would be created between the office tower and the adjacent 101 Second Street building.

Six scenarios were tested in the wind tunnel:

- (1) Existing conditions,
- (2) Existing conditions plus the proposed project,
- (3) Existing conditions plus cumulative develop (no project),
- (4) Existing conditions plus cumulative development plus the proposed project,
- (5) Existing conditions plus the alternative project, and
- (6) Existing conditions plus cumulative development plus the alternative project.

Several buildings that are under construction or approved were included in the existing model, including the 101 Second Building, Starwood Hotel and Related Companies project at Third and Mission. Cumulative buildings included the 1 Second Project, 554 Mission Project, 535 Mission Project, the Century (Natoma Mews) Project and the 524 Howard Project.

A wind tunnel study was performed in investigate the pedestrian wind environment around the proposed project site. Pedestrian-level wind speeds were measured at selected points for the existing site and with the addition of the project and cumulative buildings in order to quantify wind impacts in public spaces near the site and predict the acceptability of wind conditions near the site.

II. METHODOLOGY

Wind Tunnel Facilities

The study was conducted in the Boundary Layer Wind Tunnel at the Department of Architecture, University of California, Berkeley. The interior dimensions of the wind tunnel duct are 5 feet high, seven feet wide and 45 feet long. The test area is 36 feet downwind of the inlet, with the fan downwind of the test area. Figures 1 and 2 show the construction and dimensions of the U.C. Berkeley wind tunnel.

Model and Boundary Layer

A scale model of the project site and the surrounding area was constructed. The model extended several blocks beyond the project boundaries in all directions. Wind obstructions located further away from the project site were considered part of the general roughness of the site, and were modeled as part of the characteristic atmospheric boundary layer in the wind tunnel.

Simulation of the boundary layer in the natural wind is achieved by turbulence generators placed upwind of the test section. This allows for adjustment in the wind characteristics to provide for different model scales and varying terrain upwind of the project.

Instrumentation

The velocity measurements in this study were made with a TSI model 1266 and model TSI 1210-20 hot wire anemometers. Prior to commencement of the experiments both the probes were calibrated. Subsequent side-by-side comparisons between the two probes indicated agreement to within 5%.

A total of 33 velocity measurement locations were selected for this study located along sidewalk areas adjacent to and near the project site. An additional 4 measurements were made in the plaza created by the project.

In accordance with the San Francisco Wind Ordinance methodology for wind tunnel tests the model was tested for four wind directions: northwest, west-northwest, west and west-southwest.

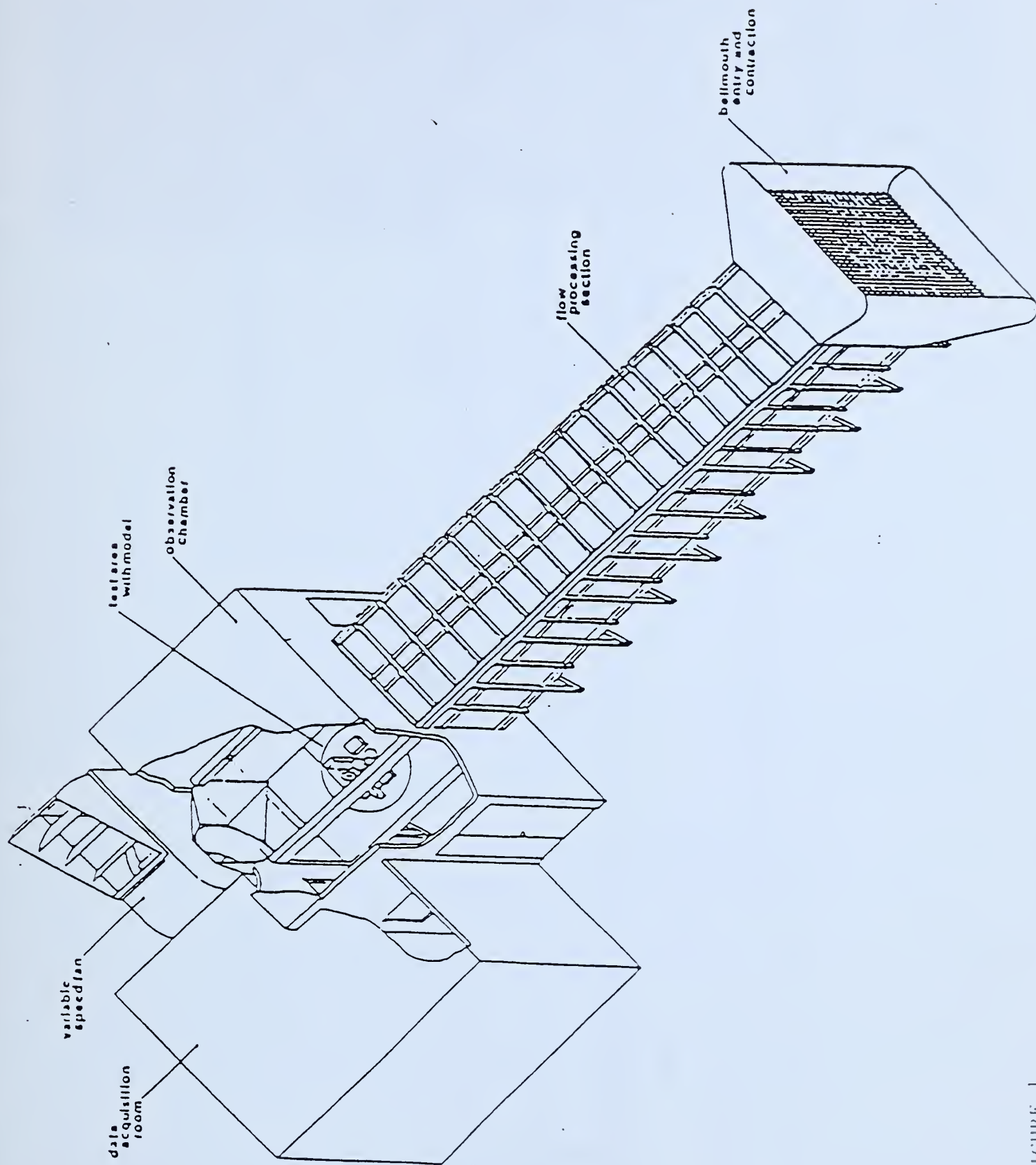


FIGURE 1
BOUNDARY LAYER WIND TUNNEL

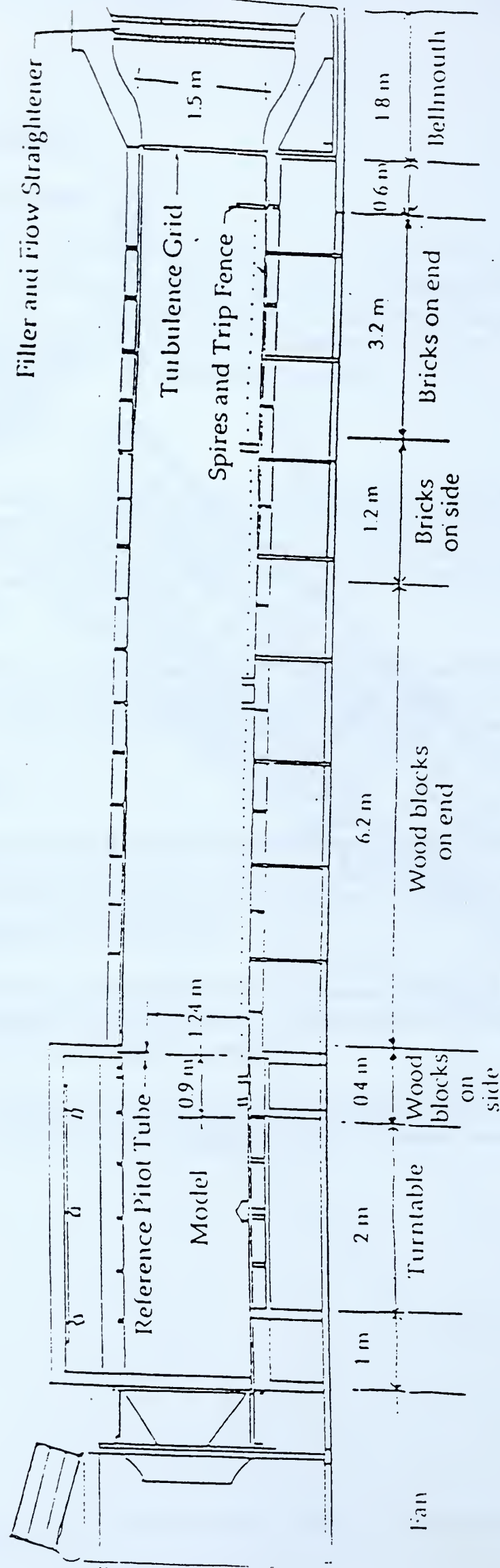


FIGURE 2: Boundary Layer Wind Tunnel Configuration

Each measurement consisted of simultaneous readings from two anemometer probes, one positioned at the desired pedestrian level location and the other at a stationary reference location above the wind tunnel floor. The axes of the probes were positioned vertically in all cases. The height of the reference sensor was selected to provide a stable characteristic reference velocity away from the influence of the building models and ground-level measurements. During each measurement the two velocity probes were sampled at a rate of 10 samples per second for a duration of 30 seconds. The collected data were analyzed to produce the quantities of interest: mean velocity, turbulence intensity, and equivalent wind speed.

III. CRITERIA AND HISTORICAL WIND RECORDS

Wind conditions partly determine pedestrian comfort on sidewalks and in other public areas. In downtown areas, high-rise buildings can redirect wind flows around buildings and divert winds downward to street level; each can result increased wind speed and turbulence at street level.

The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed. Winds up to four MPH have no noticeable effect on pedestrian comfort. With winds from four to eight MPH, wind is felt on the face. Winds from 8 to 13 MPH will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. For winds from 19 to 26 MPH, the force of the wind will be felt on the body. At 26 MPH to 34 MPH wind, umbrellas are used with difficulty, hair is blown straight, there is difficulty in walking steadily, and wind noise is unpleasant. Winds over 34 MPH increase difficulty with balance and gusts can blow people over.¹

The City of San Francisco Planning Code establishes wind criteria for the Rincon Hill Special Use District under Section 249.1 of the Planning Code. Section 249.1 of the Planning Code sets comfort levels of 7 MPH equivalent wind speed for public seating areas and 11 MPH equivalent wind speed for areas of substantial pedestrian use. In addition to comfort criteria San Francisco Planning Code establishes a wind hazard criterion. The hazard criterion is set at a hourly averaged wind speed of 26 MPH, which is not to be exceeded more than once during a year.

Predictions of wind speed are based upon historical wind records from the U.S. Weather Bureau weather station atop the old Federal Building at 50 United Nations Plaza during the years 1945-1950. This data base, comprised of 32,795 hourly observations is of sufficient length to provide a reliable estimate of future climatic conditions in San Francisco.

Table 1 shows that average wind speeds are greatest in the summer and least in the fall. Winds also exhibit a diurnal variation with the strongest winds occurring in the afternoon, and lightest winds occurring in the early morning.

Winds in San Francisco are most frequently from the west to northwest directions, reflecting the persistence of sea breezes. Wind direction is most variable in the winter. The approach of winter storms often results in southerly winds. Although not as frequent as westerly winds, these southerly winds are often strong. The strongest winds in San Francisco are typically from the south during the approach of a winter storm.²

Table 1: Seasonal Frequency of Wind Direction and Average Speed (Knots)

Direction	January		April		July		October		Year	
	Freq. (%)	Av. Speed	Freq. (%)	Av. Speed	Freq. (%)	Av. Speed	Freq. (%)	Av. Speed	Freq. (%)	Av. Speed
N	12.5	7.9	2.2	11.0	0.3	6.0	3.3	6.6	5.0	7.2
NNE	1.3	5.6	0.7	6.1	0.3	6.8	0.7	6.6	0.8	6.0
NE	4.5	5.3	1.3	4.7	1.1	7.4	2.2	5.8	1.9	5.6
ENE	1.4	6.3	0.6	4.8	0.2	5.1	0.8	5.1	0.8	5.6
E	11.9	4.8	2.6	4.5	0.1	3.9	4.8	4.5	4.8	5.0
ESE	2.11	6.4	0.3	5.2	0.1	2.5	0.6	5.8	0.8	5.8
SE	9.1	6.4	2.4	7.8	0.2	5.0	3.7	6.6	4.2	6.8
SSE	2.8	5.6	0.3	3.8	0.1	3.0	1.3	9.0	1.2	6.4
S	6.7	5.0	4.2	7.1	1.1	4.9	4.5	7.5	4.1	6.4
SSW	1.0	4.8	0.4	4.1	0.1	3.0	1.7	12.8	0.9	8.6
SW	4.5	8.0	7.7	9.2	15.6	10.1	7.8	9.1	9.3	9.3
WSW	1.0	5.9	1.7	7.1	1.2	8.1	2.8	8.8	2.4	8.6
W	13.2	7.2	43.0	10.9	53.0	13.1	34.6	9.1	35.7	10.9
WNW	7.5	11.1	20.7	14.1	14.9	14.5	15.2	10.9	13.8	12.7
NW	11.5	7.7	9.3	10.7	10.7	11.4	10.8	8.5	10.0	9.7
NNW	1.2	5.7	0.6	10.8	0.6	8.5	0.5	7.5	0.7	8.3
CALM	7.7	---	2.1	---	0.3	---	4.6	---	3.7	---

IV. ANALYSIS

The San Francisco wind code is based on wind acceptability criteria defined in terms of "equivalent wind speed" (EWS). EWS denotes the mean hourly wind speed adjusted to account for the expected turbulence intensity or gustiness at the site. The wind speed limits in the code were developed with an inherent turbulence intensity of 15%. When the measured turbulence intensity at a point is greater than 15%, the equivalent wind speed is calculated by multiplying the mean velocity at the point by a weighting factor according to the following formula:

$$\text{EWS} = V_m (2 \cdot \text{TI} + 0.7)$$

where:

V_m = mean pedestrian-level wind speed

TI = turbulence intensity

For measured turbulence intensities less than 15%, EWS is taken to be equal to V_m .

Pedestrian Locations

Each wind-tunnel measurement results in a ratio that relates the speed of ground-level wind to the speed at the reference elevation, in this case the height of the Old San Francisco Federal Building. The frequency with which a particular wind velocity is exceeded at any test location is then calculated by using the measured wind-tunnel ratio and a specified ground speed to determine the corresponding reference wind speed for each direction. In general, this gives different reference speeds for each major directional component of the wind. The wind data for San Francisco are then used to calculate the percentage of the time that the specific ground-level wind speed is exceeded for each directional component. The sum of these is the total percentage of time that the specified ground-level wind speed is exceeded. A computer is used to calculate the total percentages for a series of wind speeds until the speed exceeded ten percent of the time is found, for each location.

The mean wind speeds are compared to the comfort criterion of 11 mph for pedestrian areas, not to be exceeded more than 10 percent of the time. Separate calculations evaluate compliance with the hazard criterion. The wind data observed at the Old San Francisco Federal Building are not full hour average speeds as specified by the Code, so it is necessary to adjust the equivalent speeds to obtain the hourly average of 26 mph.³

The wind speed that would be exceeded 10% of the time at each measuring location is shown in Table 2. The locations of measurement points are shown in Figure 3. Sidewalks are pedestrian locations where the 11 MPH comfort criterion is applicable. Plazas are considered sitting areas where the more stringent 7 MPH comfort criterion applies.

Table 3 shows the calculated frequency of winds above 11 MPH for all locations that exceed the pedestrian comfort criteria for one or more of the scenarios tested.

Existing Conditions

No violations of the wind hazard code were measured for the existing scenario. The range of ground-level wind speeds was 3 to 16 mph. Exceedances of the pedestrian comfort criterion were found at 9 of the 33 measurement locations for existing conditions.

Existing + Proposed Project

No violations of the wind hazard code were measured. The project generally increased wind, with 22 points having increased wind, 7 points having decreased wind and 4 points having unchanged winds. The range of ground-level wind speeds was 3 to 16 mph. Number of ground-level locations exceeding the comfort criterion was 20 of 33. Winds in the newly created plaza (points 34 to 37) were well above the sitting area comfort criterion.

Existing + Cumulative

No violations of the wind hazard code were measured. This scenario had a mixed impact on wind, with 15 points having increased wind, 12 points having decreased wind and 6 points having unchanged winds (with respect to existing). The range of ground-level wind speeds was 2 to 16 mph. Number of ground-level locations exceeding the comfort criterion was 14 of 33.

Existing + Cumulative+ Project

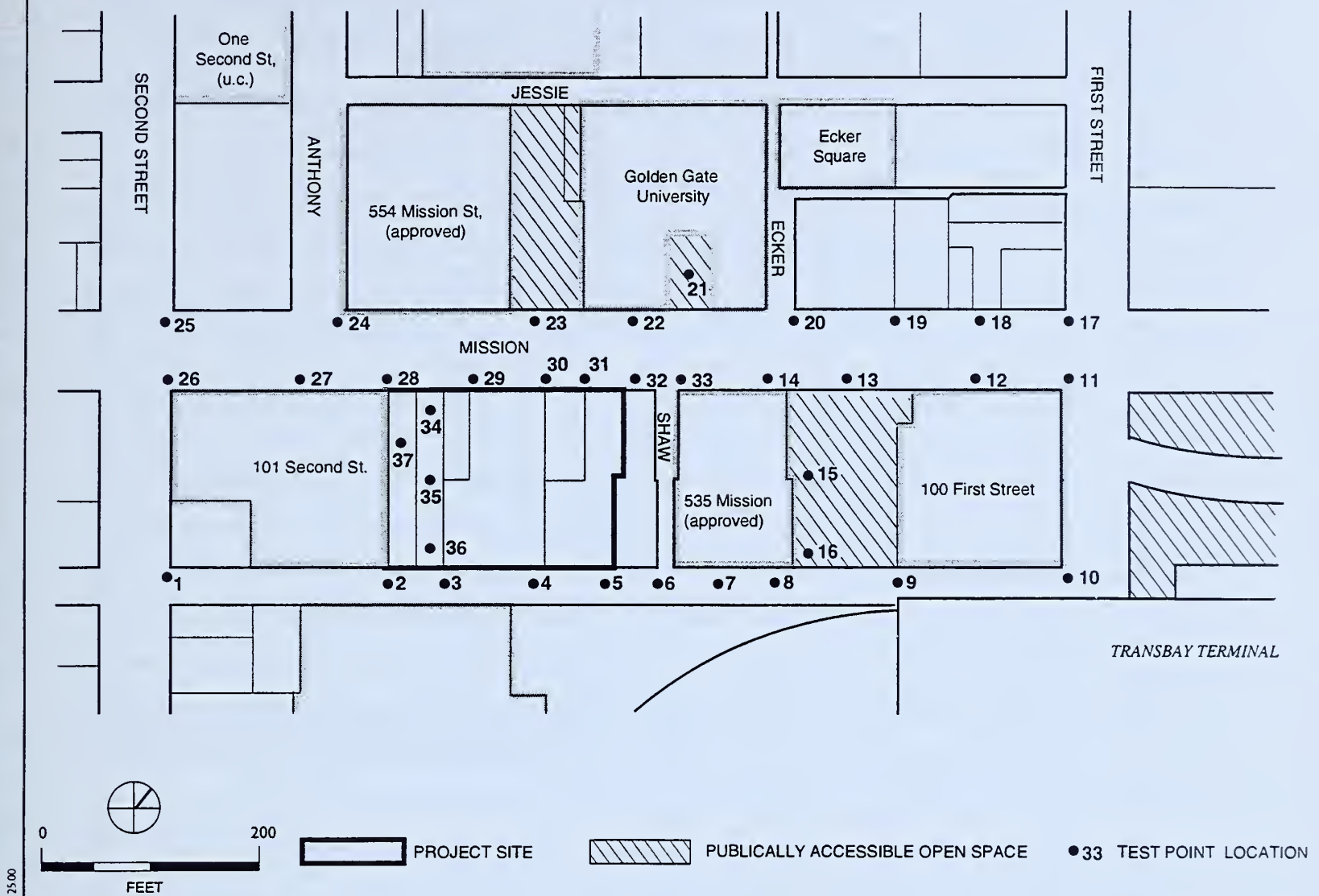
No violations of the wind hazard code were measured. This scenario generally increased winds, with 19 points having increased wind, 9 points having decreased wind and 5 points having unchanged winds (with respect to existing). The range of ground-level wind speeds was 3 to 17 mph. Number of ground-level locations exceeding the comfort criterion was 17 of 33. Winds in the newly created plaza (points 34 to 37) exceeded the sitting comfort criterion at 2 of 4 measurement points.

Existing + Alternative

No violations of the wind hazard code were measured. The alternative generally increased wind, with 19 points having increased wind, 8 points having decreased wind and 6 points having unchanged winds. The range of ground-level wind speeds was 2 to 16 mph. Number of ground-level locations exceeding the comfort criterion was 18 of 33. Winds in the newly created plaza (points 34 to 37) were well above the sitting area comfort criterion.

Existing + Cumulative + Alternative

No violations of the wind hazard code were measured. This scenario generally increased wind, with 19 points having increased wind, 8 points having decreased wind and 6 points having unchanged winds. The range of ground-level wind speeds was 3 to 17 mph. Number of ground-level locations exceeding the comfort criterion was 15 of 33. Winds in the newly created plaza (points 34 to 37) exceeded the sitting comfort criterion at 3 of 4 measurement points.



SOURCE: EIP Associates



555 MISSION STREET

FIGURE 3 WIND STUDY MEASUREMENT LOCATIONS

Table 2: Wind Speed Exceeded 10% of the Time

Point	Standard	Existing	Existing + Project	Existing + Cumulative	Existing + Cumulative + Project	Existing + Alternative	Existing + Cumulative+ Alternative
1	11	11	10	11	9	11	9
2	11	11	12	14	10	11	9
3	11	10	11	14	16	12	15
4	11	6	11	12	11	14	11
5	11	6	13	10	9	13	8
6	11	6	11	7	8	10	10
7	11	4	7	4	6	8	5
8	11	5	4	5	5	5	5
9	11	14	13	4	3	13	4
10	11	13	9	5	6	9	5
11	11	13	16	8	12	16	11
12	11	10	12	6	10	12	10
13	11	8	15	10	15	11	15
14	11	10	14	10	17	11	16
15	7	6	14	4	7	15	7
16	7	11	10	5	6	10	6
17	11	14	14	8	14	11	14
18	11	11	11	8	11	11	11
19	11	8	9	11	12	9	11
20	11	10	11	11	13	12	13
21	7	3	3	2	4	2	3
22	11	13	14	11	14	11	14
23	11	11	12	12	12	12	12
24	11	9	10	18	12	9	14

Predicted wind exceeding comfort standards are shown in **bold**.

*Denotes location exceeding the hazard criterion.

Table 2: Wind Speed Exceeded 10% of the Time (Cont.)

Point	Standard	Existing	Existing + Project	Existing + Cumulative	Existing + Cumulative + Project	Existing + Alternative	Existing + Cumulative+ Alternative
25	11	11	12	16	9	12	10
26	11	9	11	14	9	10	10
27	11	15	15	13	14	15	13
28	11	14	15	14	16	15	17
29	11	16	12	13	14	12	16
30	11	15	12	16	17	13	17
31	11	10	13	13	17	14	18
32	11	10	16	12	14	16	15
33	11	11	16	11	14	16	15
34	7	-	14	-	14	16	15
35	7	-	15	-	7	15	6
36	7	-	13	-	10	13	11
37	7	-	16	-	7	15	9

Predicted wind exceeding comfort standards are shown in **bold**.

*Denotes location exceeding the hazard criterion.

Table 3: Frequency of Winds Greater than 11 MPH (% of time)

Point	Existing	Existing + Project	Existing + Cumulative	Existing + Cumulative+ Project	Existing + Alternative	Existing + Cumulative+ Alternative
2	7.8	10.1	20.9	5.7	8.8	22.5
3	5.3	8.7	19.5	27.1	10.6	27.9
4	0.1	6.1	11.3	8.5	18.9	18.5
5	0.1	14.9	4.0	1.7	13.5	16.0
9	18.0	14.4	0.1	0.1	13.6	10.3
10	15.0	1.5	0.1	0.1	1.7	10.5
11	13.8	23.7	0.9	12.4	26.1	22.8
12	5.5	12.6	0.1	5.5	12.6	19.2
13	1.0	13.2	5.4	22.0	5.9	26.1
14	5.8	23.8	8.6	27.6	24.9	30.1
17	15.5	18.6	2.0	17.2	18.1	23.2
19	1.2	3.1	8.7	10.2	3.1	20.0
20	3.2	10.0	9.5	17.9	10.1	23.3
22	12.8	18.3	25.7	20.1	20.9	28.5
23	8.3	10.7	32.6	17.6	10.3	31.7
24	2.1	3.8	34.2	10.6	2.8	29.7
25	9.8	10.9	25.9	4.6	10.4	22.8
26	3.2	6.6	16.6	2.6	4.5	16.8
27	21.9	22.8	18.3	18.9	22.5	22.7
28	18.7	22.2	22.8	26.9	22.7	30.1
29	27.2	12.4	18.8	18.9	12.6	27.7
30	23.6	13.7	28.7	32.0	16.0	29.5
31	5.2	15.0	15.6	29.2	18.3	30.1
32	4.6	27.0	12.2	19.4	28.8	26.8
33	5.9	28.2	8.1	20.3	35.4	26.0

V. MITIGATION

Exceedances of the hazard wind criterion would be considered a significant adverse impact requiring appropriate mitigation. The hazard wind criterion was not exceeded at any of the 37 pedestrian measurement locations.

The newly created plaza area within the project has winds well in excess of the 7 MPH sitting area comfort criterion. This space should be landscaped to reduce wind and improve usability. Porous materials or structures (vegetation, hedges, screens, latticework, perforated or expanded metal) offer superior wind shelter compared to a solid surface. Outdoor sitting or eating areas will need substantial wind shelter directly upwind. Wind-sheltering elements should have sufficient height to shelter the area in question (wind shadows behind porous wind screens or shelter belts provide shelter a distance downwind equivalent to 3-5 times the height of the wind screen). Given the strong winds predicted, vegetation will need to be wind-tolerant and wind-sheltering structures need to be securely anchored and designed to withstand strong winds. The landscape plan should be evaluated in wind tunnel tests to demonstrate compliance with the sitting area comfort criterion.

NOTES

1. Edward Arens, Designing for an Acceptable Wind Environment, Transportation Engineering Journal, March 1981.
2. E. Jan Null, Climate of San Francisco, Report No. NOAA-TM-NWS WR-126, 1978.
3. Arens, E., "Designing for Acceptable Wind Environment," Transactions Engineering Journal, ASCE 107, No. TE 2, 1981, pp. 127-141.

APPENDIX C. TRANSPORTATION

TABLE C.1

Level of Service Criteria for Signalized Intersections

Level of Service	Stopped Delay per Vehicle (sec)	Volume to Capacity Ratio
A	≤ 5.0	0.00 - 0.59
B	> 5.0 to ≤ 15.0	0.60 - 0.69
C	> 15.0 to ≤ 25.0	0.70 - 0.79
D	> 25.0 to ≤ 40.0	0.80 - 0.89
E	> 40.0 to ≤ 60.0	0.90 - 0.99
F	> 60.0	1.00 or greater

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington D.C., 1994 and V and C Ratio from Transportation Research Circular #212, Transportation Research Board, Washington D.C., 1980.

LOS A - Delays of less than 5 seconds

This level of service occurs when progression is extremely favorable. Most vehicles arrive during the green phase and are not required to stop. Short cycle lengths may also contribute to low delay.

LOS B - Delays of greater than 5.0 seconds to 15.0 seconds or less

This level of service generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.

LOS C - Delays of greater than 15.0 seconds to 25 seconds or less

These higher delays may result from fair progression, longer cycle lengths, or both. Drivers may occasionally be required to wait through more than one signal cycle (red phase). The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

LOS D - Delays of greater than 25.0 seconds to 40.0 seconds or less

At level of service D, congestion becomes more noticeable. Longer delays may result from a combination of unfavorable progression, long cycle lengths, or high volume to capacity (v and c) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. The number of drivers having to wait through more than one red phase is noticeable.

LOS E - Delays of greater than 40.0 seconds to 60.0 seconds or less

This level is considered by many agencies to be the limit of acceptable delay. The high range of delays generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Drivers frequently are unable to clear the intersection on the first green phase.

LOS F - Delays in excess of 60.0 seconds per vehicle

This level, considered to be unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios.

TABLE C.2

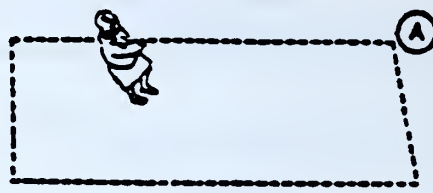
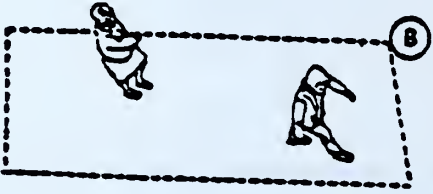
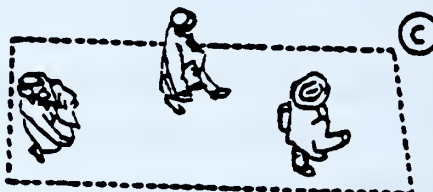
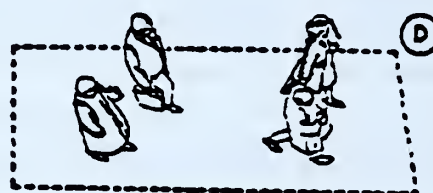

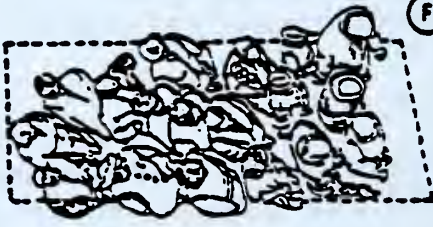
Level of Service Criteria for Unsignalized Intersections

Level of Service	Stopped Delay per Vehicle (sec)
A	≤ 5.0
B	> 5.0 to ≤ 10.0
C	> 10.0 to ≤ 20.0
D	> 20.0 to ≤ 30.0
E	> 30.0 to ≤ 45.0
F	> 45.0

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington D.C., 1994.
The Duffey Company.

For unsignalized intersections, the level of service is calculated by approach and is based on the type of control and the volume of opposing traffic. The average total delay for a particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. The delay thresholds for each level of service are lower than for signalized intersections due to driver expectations and perceptions. Delays experienced at a stop controlled street may be more onerous because the driver must be constantly alert to oncoming traffic and the availability of gaps to enter and cross traffic. Also the degree of variability in delays is greater for unsignalized intersections because the traffic flows are not controlled in the same manner. The levels of service range from LOS A where there are sufficient gaps to pull across traffic with less than a 5.0 second delay to LOS F where there are insufficient gaps of adequate size to allow side street traffic to cross safely through a major street traffic stream.

Level of Service Criteria for Pedestrian Walkways

<p>LEVEL OF SERVICE A</p> <p><u>Pedestrian Space:</u> ≥ 130 sq ft/ped <u>Flow Rate:</u> ≤ 2 ped/min/ft</p> <p>At walkway LOS A, pedestrians basically move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.</p>	
<p>LEVEL OF SERVICE B</p> <p><u>Pedestrian Space:</u> ≥ 40 sq ft/ped <u>Flow Rate:</u> ≤ 7 ped/min/ft</p> <p>At LOS B, sufficient area is provided to allow pedestrians to freely select walking speeds, to bypass other pedestrians, and to avoid crossing conflicts with others. At this level, pedestrians begin to be aware of other pedestrians, and to respond to their presence in the selection of walking path.</p>	
<p>LEVEL OF SERVICE C</p> <p><u>Pedestrian Space:</u> ≥ 24 sq ft/ped <u>Flow Rate:</u> ≤ 10 ped/min/ft</p> <p>At LOS C, sufficient space is available to select normal walking speeds, and to bypass other pedestrians in primarily unidirectional streams. Where reverse-direction or crossing movements exist, minor conflicts will occur, and speeds and volume will be somewhat lower.</p>	
<p>LEVEL OF SERVICE D</p> <p><u>Pedestrian Space:</u> ≥ 15 sq ft/ped <u>Flow Rate:</u> ≤ 15 ped/min/ft</p> <p>At LOS D, freedom to select individual walking speed and to bypass other pedestrians is restricted. Where crossing or reverse-flow movements exist, the probability of conflict is high, and its avoidance requires frequent changes in speed and position. The LOS provides reasonably fluid flow; however, considerable friction and interaction between pedestrians is likely to occur.</p>	
<p>LEVEL OF SERVICE E</p> <p><u>Pedestrian Space:</u> ≥ 6 sq ft/ped <u>Flow Rate:</u> ≤ 25 ped/min/ft</p> <p>At LOS E, virtually all pedestrians would have their normal walking speed restricted, requiring frequent adjustment of gait. At the lower range of this LOS, forward movement is possible only by "shuffling." Insufficient space is provided for passing of slower pedestrians. Cross- or reverse-flow movements are possible only with extreme difficulties. Design volumes approach the limit of walkway capacity, with resulting stoppages and interruptions to flow.</p>	
<p>LEVEL OF SERVICE F</p> <p><u>Pedestrian Space:</u> ≤ 6 sq ft/ped <u>Flow Rate:</u> variable</p> <p>At LOS F, all walking speeds are severely restricted, and forward progress is made only by "shuffling." There is frequent, unavoidable contact with other pedestrians. Cross- and reverse-flow movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristic of queued pedestrians than of moving pedestrian streams.</p>	

Source: Hi Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209,

APPENDIX D. AIR QUALITY

This appendix describes air pollutants, summarizes their health effects, and shows the applicable ambient air quality standards.

Criteria air pollutants refer to a group of pollutants for which regulatory agencies have adopted federal, state, or regional ambient air quality standards and pollution reduction plans. Criteria air pollutants include ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter, and lead. Reactive organic gases (ROG) and oxides of nitrogen (NO_x) are also regulated as precursor contaminants that react to form ozone.

Toxic air contaminants refer to a category of air pollutants that pose a present or potential hazard to human health, but which tend to have more localized impacts than criteria air pollutants. The Air Quality analysis addresses routinely-emitted toxic air contaminants.

Table D.1 shows the potential human health effects of the criteria air pollutants, and Table D.2 shows the federal and state ambient air quality standards for these pollutants.

TABLE D.1
HEALTH EFFECTS SUMMARY OF THE MAJOR CRITERIA AIR POLLUTANTS

Air Pollutant	Adverse Effects
Ozone	Eye irritation. Respiratory function impairment.
Carbon Monoxide	Impairment of oxygen transport in the bloodstream, increase of carboxyhemoglobin. Aggravation of cardiovascular disease. Impairment of central nervous system function. Fatigue, headache, confusion and dizziness. Can be fatal in the case of very high concentrations in enclosed places.
Nitrogen Dioxide	Risk of acute and chronic respiratory illness.
Sulfur Dioxide	Aggravation of chronic obstruction lung disease. Increased risk of acute and chronic respiratory illness.
Particulate Matter (PM ₁₀)	Increased risk of chronic respiratory illness with long exposure. Altered lung function in children. With SO ₂ , may produce acute illness. May be inhaled and possibly lodge in and/or irritate the lungs.
Fine Particulate Matter (PM _{2.5})	May be inhaled and possibly lodge in and/or irritate the lungs.
Lead (Pb)	Prolonged exposure may cause anemia, kidney disease, and in severe cases, neuromuscular disorder and neurologic dysfunction.

Source: Bay Area Air Quality Management District Air Quality Handbook, 1993; Zannetti, Paolo, *Air Pollution Modeling*, 1990.

TABLE D.2
FEDERAL AND STATE AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standard/a/	Federal Standard/b/
Ozone	1-hour	0.09 ppm	0.12 ppm
	8-hour	—	0.08 ppm
Carbon Monoxide	1-hour	20.00 ppm	35.00 ppm
	8-hour	9.00 ppm	9.00 ppm
Nitrogen Dioxide	1-hour	0.25 ppm	—
	Annual Average	—	0.053 ppm
Sulfur Dioxide	1-hour	0.25 ppm	—
	3-hour	—	0.5 ppm
	24-hour	0.04 ppm	0.14 ppm
	Annual Average	—	0.03 ppm
Particulate Matter (PM ₁₀)	24-hour	50 µg/m ³	150 µg/m ³
	Annual Geometric Mean	30 µg/m ³	—
	Annual Arithmetic Mean	—	50 µg/m ³
Fine Particulate Matter (PM _{2.5})	24-hour	—	65 µg/m ³
	Annual Arithmetic Mean	—	15 µg/m ³
Lead (Pb)	30-day Average	1.5 µg/m ³	—
	Calendar Quarter	—	1.5 µg/m ³

Notes:

ppm = parts per million by volume

µg/m³ = micrograms per cubic meter

— = No standard exists for this category

- a. California standards for ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, and particulate matter (PM₁₀) are values that are not to be exceeded.
- b. The form of the federal standards (i.e., the statistical method of how the standard is applied to real-world data) varies from pollutant to pollutant. For further information, 40 CFR Part 50 includes the relevant form for each federal standard.

Source: EIP Associates.



PLANNING DEPARTMENT

City and County of San Francisco 1660 Mission Street, Suite 500 San Francisco, CA 94103-2414

(415) 558-6378

PLANNING COMMISSION
FAX: 558-6409

ADMINISTRATION
FAX: 558-6426

CURRENT PLANNING/ZONING
FAX: 558-6409

LONG RANGE PLANNING
FAX: 558-6426

NOTICE OF COMPLETION AND AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE FOLLOWING:

1999.603E: 555 Mission Street Office Project. The proposed project involves demolition of six existing buildings and construction of a new 31-story building (about 455 feet tall including parapet) containing about 557,000 gross square feet (gsf) of office space, about 8,000 gsf of retail space, and about 38,990 gsf of below grade parking (about 150 valet spaces in two levels). A plaza of about 11,000 sf would be constructed between the new building and the office building at 101 Second Street to the west. The project site is on the south side of Mission Street, between First and Second Streets, and within the C-3-O (Downtown Office) zoning district; Assessor's Block 3721, Lots 69, 70, 78, 79, 80, and 81. (GITELMAN)

Notice is hereby given to the general public as follows:

1. A Draft Environmental Impact Report (EIR) has been prepared by the Planning Department in connection with this project. A copy of the report is available for public review and comment at the Planning Department offices at 1660 Mission Street, 1st Floor Planning Information Counter. Referenced materials are available for review by appointment at the Planning Department office at 30 Van Ness, 4th Floor; call 558-5990.
2. The Draft EIR concludes that the project would not result in any significant project-specific environmental impacts, but would contribute to significant cumulative traffic congestion at nearby intersections.
3. A public hearing on this Draft EIR and other matters has been scheduled by the Planning Commission for Thursday, August 17, 2000 in Room 400 City Hall, 1 Dr. Carlton B. Goodlett Place, beginning at 1:30 or later. (Call 558-6422 the week of the hearing for a recorded message giving a more specific time.)
4. Public comments will be accepted from July 15, 2000 to the close of business on August 29, 2000. Public comments should be sent to Hillary Gitelman, Environmental Review Officer, at the San Francisco Planning Department, 1660 Mission Street, Suite 500, San Francisco, CA 94103.

DOCUMENTS DEPT.

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[The following text is extremely faint and largely illegible. It appears to be a multi-paragraph document, possibly a letter or a report, with several lines of text visible across the page.]

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San Francisco Planning Department
Major Environmental Analysis
1660 Mission Street, 5th Floor
San Francisco, CA 94103

Attn: Hillary E. Gitelman, EIR Coordinator
1999.603E - 555 Mission Street

PLEASE CUT ALONG DOTTED LINE

RETURN REQUEST REQUIRED FOR FINAL
ENVIRONMENTAL IMPACT REPORT

REQUEST FOR FINAL ENVIRONMENTAL IMPACT REPORT

TO: San Francisco Planning Department,
Major Environmental Analysis

Please send me a copy of the Final EIR.

Signed: _____

Print Your Name and Address Below

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